



NEXT GENERATION

The world's #1 computer and videogame authority

September 1997

"Forgive me..."

...for I have
murdered harlots,
possessed rats,
and arrived
two years before
the chosen time"

Driven by a stunning new 3D engine

and a disturbingly dark plot, Shiny's

Messiah is like nothing else before it



**How to
sell your
game idea**
A guide to creating
and pitching a
design document

volume three

33

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Messiah's plot, which lets gamers try their hand at playing the savior, might spark outrage among some (the Christian Right, for instance). But the game's engine, which works with models made up of over 500,000 polygons, tessellated in real time, is beyond reproach.



Is technology finished?



John Romero thinks so. Ion Storm's *Daikatana* (page 82) will use the Quake engine. Why? Because Romero (and he's not alone), feels that technology has reached the point of irrelevance, that games are reaching the point movies were after color and sound were introduced. Tech is the past, and design — and design alone — is the future. *Quake* is a great engine, so why waste months of development time (that could better be spent on game design) doing something that will be only marginally better than the easily licensed engine from Id?

Shiny's Dave Perry couldn't disagree more. Without the complete control over every pixel on the screen that comes from creating your own engine, he says, you cannot truly make the game you want. That's why he's discarded the MDK engine, and is spending millions of dollars and thousand of person hours creating a new engine for *Messiah* (page 56).

Who's right? There is merit to both arguments, and while no trend has been more disappointing in the past 18 months than the substitution of technology for real advances in gameplay (a charge which *Quake* may certainly be guilty of, especially in one-player mode), suggesting that we are nearing the end of the road for game technology sounds to us a bit like the patent official in the late 1800's who threw up his hands and declared that everything that could be invented, had been invented.

Either way, whether a game is based on a radical new engine, or a refinement of an old one, it can't get past the idea stage — or get pitched to a potential publisher — without a design document. In an exclusive special report starting on page 40, we present all the information budding game designers need to make — and sell — a game idea, whether they plan use an off the shelf engine or create their own.

NEXT
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LOOK FOR THE Novel FROM FOCIL BOOKS

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Most of us know what a film screenplay looks like, but what about a game design? This month Next Generation reveals what it takes to put together a professional design document, and a few other things you'll need to know if you're serious about getting your game made.

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Alphas: More than 15 games previewed

Games for PlayStation, Nintendo 64, and PC previewed. Plus profiles of classic Australian developers, Melbourne House, and a look at Midcom's first foray into military sims



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Finals: 23 new games reviewed

Every month, NG reviews each and every major new game release, so that you know which ones to buy immediately, rent first or avoid altogether.

London

Nº.15570

FRIDAY, 31 OCTOBER

— CLASSIFIED —

GRAVEDIGGER — WANTED —

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ng disc contents



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We have been following the development of Nuclear Strike closely. Now, we are pleased to invite you to an online roundtable with the Nuclear Strike team. Join us Thursday, August 21, from 5 p.m. - 7 p.m. on The Palace chat. (Members of the Strike team are on discs accompanying issues 31 and 33.) For more information, go to: www.next-generation.com/cdrom.



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previews

Banjo Kazooie,
Sonic R, Crash
Bandicoot 2,
GoldenEye 007,
Last Bronx, X-Fire,
Mission: Impossible,
Panzer Dragoon Saga



special

Howard Lincoln,
Messiah,
Payback!,
David Perry,
Prey, IDSA,
Pres. Douglas
Lowenstein,
KillWheel!



talking

Nuclear
Strike with
John Manley
& Michael
Becker



finals

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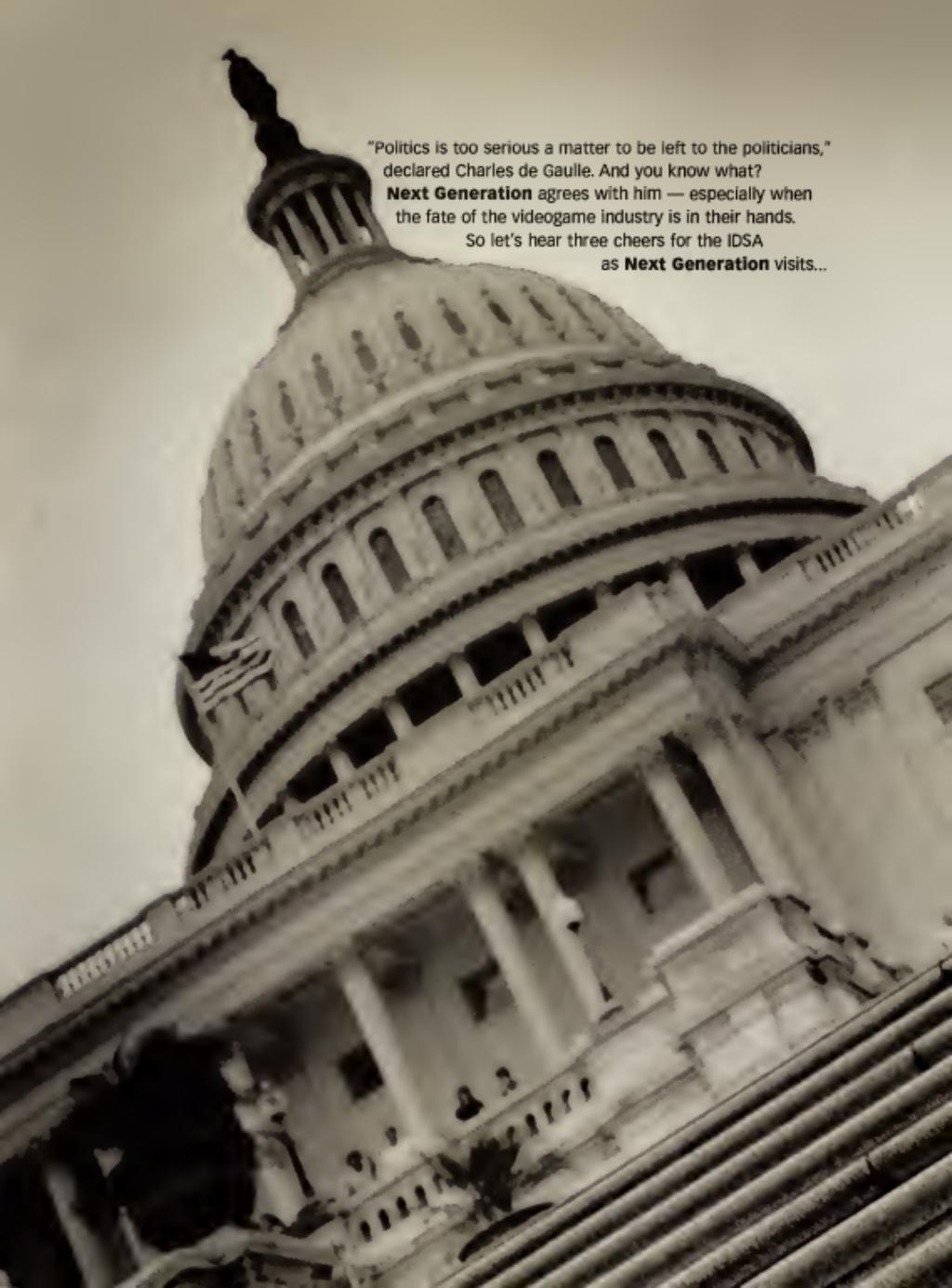


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"Politics is too serious a matter to be left to the politicians," declared Charles de Gaulle. And you know what?

Next Generation agrees with him — especially when the fate of the videogame industry is in their hands.

So let's hear three cheers for the IDSA
as **Next Generation** visits...



Our man in Washington

The IDSA (Interactive Digital Software Association) is the videogame industry's major trade organization, and Doug Lowenstein is its president. Based in Washington DC, the IDSA handles pretty much all of the game industry's dealings with angry politicians, organizes and runs E3 (the Electronic Entertainment Expo), fights software piracy, supports political campaigns that help videogaming, and opposes those that don't. It's Doug who takes Senator Lieberman's calls to the games industry and Doug who works behind the scenes to make sure that the game industry is well represented in our nation's capital. It's a dirty job, but someone's got to do it...

One big happy family

NG: What exactly is the IDSA?

Doug: The Interactive Digital Software Association was created in April of 1994 as a trade association to represent the business and public policy interests of the interactive entertainment software industry of the United States.

NG: So you're the videogame software industry's representative in Washington. Just to be clear, what do



you mean by "public policy interests"?

Doug: The issues that tend to be in the legislative area, both at the state and federal government level, pertaining to the entertainment software business. These issues can concern content regulation, ratings, copyright, international trade, software taxation, and a variety of other issues in which the government is involved.

NG: But you're not the only trade body for the games industry; there's also the Software Publishers Association (SPA). How do you differ from them?

Doug: Our focus is strictly representing companies in the business of publishing entertainment software. And in this

way we're much more focused on one particular niche of the market. The SPA has a broader view and represents a wider range of software companies, including business software developers and publishers.

NG: So are all the main videogame software publishers members of the IDSA?

Doug: Yes, we have 41 members today. Each member has equal footing, but some of the biggest, most high-profile companies include Electronic Arts, GT Interactive, Interplay, LucasArts, Midway, Microsoft, Spectrum Holobyte, Virgin, and Midway. Remember, this is a software publishers organization, not a hardware producers organization, so Sega, Sony, and Nintendo are also members, but only as software companies.

NG: So supposing Senator Lieberman had gotten excited about, say, the damage to children's eyesight that *Virtual Boy* might have caused, instead of violent content. Would this have been an issue that the IDSA would have been involved with?

Doug: Probably not, because it probably wouldn't have been an event that would have caused software companies to come together and recognize the need to work together.

NG: But videogame companies are constantly bickering with each other. And as a body made up of all these independent companies that are locked in life-or-death competition with each other, don't you find yourself constantly tugged in different directions by companies with self-serving agendas?

Doug: Certainly one of my great concerns when I took this job was the intensely competitive nature of the companies in this business and their lack of history of working together in a form of this sort.

It is quite common for many industries that are far more mature than ours to have trade associations in which competitors identify common concerns and work through the association to advance them. But I was very concerned, given the intense competitiveness of our business, that it might not work with the videogame companies. But I am pleased to say that it has been one of the great rewards and surprises of being involved in the IDSA to see how companies have managed to set aside their specific corporate interests and competitiveness and look at issues from the standpoint of, "What is important for the overall industry?" Relatively little time has been spent trying to referee divergent points of view on our agenda.

The story so far...

NG: So why was the IDSA created in the first place?

Doug: It was formed because of two converging factors. First, there was a growing recognition in late 1993 that the games industry had really reached a point in its size and impact in the US that it needed a voice of its own. Second, and at the same time that this realization was developing, the US Congress determined that videogame and computer game violence was the latest and direst threat to the health and welfare of western civilization. This threat really helped crystallize the thinking on the part of a lot of the game industry's executives that the time was right for a common voice for the industry.

NG: You're talking about Senator Lieberman and his campaign against videogame violence. So the IDSA was created, partly, to deal with this issue?

Doug: Right. What we faced was an effort by Congress to regulate the content of our industry through a federally mandated ratings system. Basically, we were given a period of time to come up with our own system of rating game content — or they would do it for us. So we spent a

considerable amount of time working with Dr. Arthur Pober to create the Entertainment Software Ratings Board (ESRB) which has now been firmly established as the entertainment software rating system in the United States. The ESRB has rated over 3,000 products since September of 1994 and is used by virtually every leading entertainment software publisher in America.

So that was our initial undertaking, and it was quite a monumental one in terms of what we were trying to achieve. It also occupied a good deal of time in the early formative months of the association.

NG: And after Senator Lieberman was calmed down, what did the IDSA tackle next?

Doug: Following right on the heels of the ratings issue was the need to create a dedicated trade event that was owned by and operated for the entertainment software publishing community, and of course E3 became that event. The IDSA owns and operates E3 and it is, obviously, an ongoing project that consumes a significant proportion of our time here. It is also quite profitable and is the primary source of income for the association.

NG: So what other threats to or projects for the videogame industry is the IDSA involved with?

Doug: Well, after the whole ratings issue and E3, a third area of tremendous importance and significant investment is our anti-piracy program. The packaged-goods piracy problem in the U.S. isn't terribly serious, but around the world we as an industry face an estimated \$3 billion per year in lost revenue due to piracy. We're talking about millions and millions of counterfeit and pirated games being sold each year around the world. This cuts money from R&D budgets, and affects the price of games in the U.S.

So we as an association are putting in place a multifaceted program to protect the intellectual property rights of our members. This program includes public policy advocacy here in the U.S. with the U.S. government, active investigation and enforcement efforts in specific countries where we have identified particularly acute problems for our business, training and education of U.S. customs officials and law enforcement officials, working with foreign governments directly and with third parties to include adoption of effective intellectual property regimes, and it includes an online enforcement initiative to try and make some headway in the growing problem of Internet piracy.

NG: You say that piracy isn't so much a problem in the U.S., so where is it a problem?

Doug: China is top of the list, both as having a large pirated market internally, but also as the world's largest manufacturer of pirated product for export around the rest of the world. Other problem countries would be Hong Kong, Taiwan, Paraguay, Bulgaria, Argentina, and Mexico. Russia is becoming a serious problem, while other Eastern European countries are becoming more of a threat as their economies continue to emerge.

NG: So what other day-to-day issues does the IDSA have to deal with?

Doug: The whole area of public policy advocacy is an ongoing thing. We are very active at the federal and state level seeking legislation that will help our industry and its growth, as well as opposing legislation that would stifle our industry's growth. This could mean opposing efforts to regulate Internet content, promoting the adoption of a new international intellectual property rights treaty, or even working to ensure the fair treatment of software exports. On the state level we periodically face significant attacks by legislators attempting to regulate our industry, specifically in the area of content. **Next Generation**

actually wrote about one such effort in Arizona (**NG 29**) earlier this year.

We are also involved with research. We believe that we develop some of the most unique research available to companies in the entertainment software industry. We conduct annual consumer research — the deepest research that anyone does in this industry — on consumer buying habits in the area of entertainment software. And we also develop research on the economic impact of our industry on the U.S. economy and this is a tremendously valuable tool for educating policy makers and the media on just how important this business is in the U.S. today.

Videogames in Washington

NG: What do most politicians in Washington think of videogames? Is the industry viewed as a healthy, profitable business which generates millions of dollars of revenue? Or are most politicians suspicious of videogames because of the violent content debate?

Doug: It depends on who you talk to. In a number of sectors over the last few years we have made tremendous progress in educating policy makers on the



importance of the videogame industry. For example, the United States Trade Representatives office has recently been very helpful in international negotiations in seeking to protect our industry because, in large part, they have a much better idea than they did before about how economically important the videogame industry is. For example, the U.S. recently negotiated the Information Technology Agreement, and in its earliest drafts entertainment software was not included. But as a result of our efforts and working with the Clinton administration, they became very strong advocates of a comprehensive treaty that included entertainment software — because



they completely understood how important this industry has become in the U.S. and global economy. The videogame industry is a strong exporter, and so from a balance of trade standpoint videogames are very important to U.S. policy makers.

NG: So part of the IOSA's job is to educate politicians about the good that videogames do?

Doug: Absolutely. In Congress, we have made it a priority over the last 12 months to aggressively educate legislators on the industry. In February we held "Entertainment Software Day," which was one of the most important events that has ever been held in Washington for our industry, and around 20 IOSA member companies came to Washington and demonstrated and displayed products to members of Congress, the administration, and Congressional staff.

There really is no substitute, when you talk about the game industry, for two members of Congress sitting down at a computer terminal — and this actually happened — and playing a game of NCAA Basketball representing their respective state schools. They engaged with our product in a way that they never had before, and we're going to continue these kind of efforts.

NG: And in this kind of way you're getting the message through?

Doug: Gradually there is a growing recognition that entertainment software is part of the mainstream entertainment force in this country and one worthy of protection and consideration.

Now, having said that, I don't want to overstate the facts. There are certainly politicians in Congress who don't fully understand the industry and tend to have a less than positive view of its products because they associate it with violent content. So one of the things that we are out there constantly trying to do is make two critical points. One, that our industry appeals to a very broad demographic and that we don't make homogenized

products because we don't have a homogenized market — like any other entertainment industry we have an obligation to serve a market that ranges from kids to senior citizens. Two, the vast majority of product is rated by the ESRB as acceptable to people over six years old, so while there is a perception in some quarters that games are violent, the facts are otherwise. And we try to drive that point home as forcibly as we can on the Hill.

NG: So the tide is turning, and more and more politicians are seeing the good in videogames?

Doug: Oh yes, we have people in Congress now who are actively interested in our industry and are supportive of our industry generally speaking. And that was simply not the case a few years ago. I even believe that our friends Senator Lieberman and Senator Kohl have both moderated their views on this industry based on a growing understanding of the quality of the product and the nature of the product that is out there. That's not to say that everyone's "got religion," because they haven't — yet. But we're still working on complete conversions!

Senator Lieberman

NG: So are you the first person Senator Lieberman calls whenever he feels he has something to say to the game industry?

Doug: Yes, that's fair to say.

NG: Obviously Senator Lieberman has been the most high-profile politician in the whole violent content/videogames debate. But is he really the main focus and lightning rod for the whole debate? Or are there other politicians equally as involved but in more behind-the-scenes roles?

Doug: No, I would say that in the U.S. government, Senate, and Congress, Lieberman is certainly the lightning rod for the whole debate. And I will say this too, if we are going to have a lightning rod, I would rather have Senator Lieberman as our antagonist, a man who I believe is a thoughtful and open-minded individual, than many others who I believe would be more demagogic in their approach to the issue than Senator Lieberman is.

NG: It sounds like you like him, so what's the real scoop with the guy?

Doug: Meaning why is he doing this? I believe that on a personal level Senator Lieberman was genuinely concerned with some of the videogames that he saw and that as a legislator he had a platform from which he could have some impact.

We certainly disagree, for the most part, with how he has approached this issue and I think there is a very thin line between advocacy (merely arguing a point of view) and having a chilling effect on the content community (actually coercing designers to censor their own products). But in fairness to Senator Lieberman I think he is respectful of the First Amendment and I think he is sensitive to these kinds of issues. We may have some differences with him as to where this line needs to be drawn, but I think he genuinely believes that our industry ought to be free to publish what it wishes and I don't think he would support — indeed, he has not supported efforts — to interfere with that right.

NG: But no one's reported seeing him playing Mortal Kombat just yet?

Doug: No, I don't think that Senator Lieberman is secretly a closet gamer...

The politics of ratings

NG: The result of Senator Lieberman's initial campaign was the establishment of the industry's own content ratings system. How real — at the time, or since — was the threat of an enforced federal system of ratings?

Doug: I think you can find an answer to that question by looking at what happened to the television industry this past year. The TV industry faced a demand in the Congress to adopt a ratings system and the TV industry capitulated. This came a little over two years after the game industry faced the same threat, and ironically by the way, the legislation that was introduced to mandate a TV ratings system was the identical legislation introduced to mandate a videogame and computer game rating system. So the fact of the matter is that I have absolutely no doubt that had our industry not moved to self-regulation, the U.S. Congress would have passed and the President would have signed legislation setting up a commission to set up a federal ratings system for us.

NG: And this would be a worse situation than the self-governing system that we have now instead?

Doug: I don't think that there is any question that we would be in a worse situation. The notion of any federal role in regulating content is terrifying.

NG: Was there ever any real threat of Congress banning violent game content altogether?

Doug: No, even at the height of the Congressional controversy, at no point was Senator Lieberman advocating legislation that would have banned the publishing of particular types of game. The pressure was to create a ratings system, but there was never really a threat to ban these games altogether.

NG: So there's no real danger of politicians dictating to game companies about what sort of games they can and can't make?

Doug: Not as such, no. But the problem is in any democracy when the central government begins to meddle in the creative process is that it can have subtle and sometimes fairly overt effects on business and creative decisions. And these pressures have the practical impact of amounting to de facto regulation of content. This was the threat that we faced at the time, and to some lesser degree that threat is always present.

We have in this country a continued movement by various factions in our political culture that would impose a moral value system on many other people. And I think it's always a concern of ours that these forces — forces that don't take a great deal to stir up — may emerge as advocates for some form of regulation that could be very damaging to those involved in the creative process.

NG: If any *Next Generation* readers want to add their voice to the violent content debate, what is the best thing they can do?

Doug: I would say there are a couple of things. First, find out who your local Congressman and Senator are and write them a letter that doesn't attack the member for trying to regulate our industry but instead talks about how you play the product, what type of enjoyment and value you get from it, and indicates your view that the Congressman or Senator ought to be taking all actions necessary to protect and advance the business interests of this industry that is providing consumer products to you, the game player, and contributing to the economy.

Also, it would be worth mentioning in such a letter the impact of videogames on popular culture at large. A recent story in *BusinessWeek* talked about how videogames are actually an asset to those who use them. Increasingly people are realizing that playing videogames are helping people prepare for the workplaces of tomorrow. They can prepare people to work with 3D environments, they promote comfort with computer technology, and some evidence is developing that computers and videogames can be used as learning tools. Also, the way some of our products have become

part of popular culture — such as Sonic and Mario — is something that gamers should be proud of. And communicating this message to decision makers would be a good thing.

NG: So you don't advise ranting at them?

Doug: I don't think that, at this point in time, it would be helpful or desirable to write letters blasting Congress or Senator Lieberman for what has happened so far. There is nothing content-related pending in Congress to be concerned about — so we don't want to be rattling the cage. Instead we should be communicating the message that there is a community — or a constituency — of players out there who do, or will, vote.

Atlanta, permanent home for E3?

NG: How do you respond to criticisms that although this year's E3 was excellent, Atlanta's World Congress Center was a terrible venue and everyone would have been even happier if the show had been held elsewhere, closer to the epicenter of the industry like L.A. or Las Vegas?

Doug: First and foremost you have to ask exhibitors, "Did the show deliver what you expected and needed?" and that's a high-quality audience, high-level press, and positive visibility for the industry — and in all those regards the show was an unqualified success in Atlanta.

I heard this same message from companies with

headquarters in L.A., from companies with headquarters in New York, and from companies with headquarters all places in between. That said, it is certainly true that for many west coast companies it would still be preferable to have the show on the west coast. But any suggestion that Atlanta as a venue and a facility didn't serve this industry well in 1997, I think would be an inaccurate conclusion, and not a conclusion that would be shared by the majority of exhibitors. Let me add that the show moved to Atlanta only because we ran out of space in L.A. and would not have been able to accommodate several dozen exhibitors. We felt it was important for the show to be open to as many companies as possible seeking to establish a presence in this industry.

NG: So is E3 in Atlanta for good?

Doug: Not necessarily. We'll be in Atlanta for 1998, but after that nothing is fixed. We'll be hearing presentations from venues — including Los Angeles — who want us to locate E3 there in 1999 and beyond, and our board of directors will make that decision in early August.



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STREET. THEY USUALLY

ATTACK IN PAIRS!"

-Hawk Manson

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TAKE IT OUTSIDE. BECAUSE THIS BATTLE IS TOO BIG FOR SOME SKINNY

ASS ARENA. 4 KILLER CHARACTERS. DOZENS OF BRUTAL WEAPONS. TONS OF CRUSHING
MOVES. AND VIOLENT ACTION THAT GOES SO FAST, THERE'S ONLY TIME TO REMEMBER HALF THE
GOLDEN RULE.

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news

Essential analysis of today's most crucial gaming news

Matsushita: Finally pulling the plug

After years of delays and hype, Matsushita calls it a day for M2

The fate of Matsushita's blighted M2 technology has finally been sealed. **Next Generation** has discovered that the sole licensee of the technology has

Many suspected things were not going according to plan

cancelled the entire consumer game console project in a move that could cost the Japanese giant hundreds of millions of dollars.

Leaks reached **NG** at the end of May that 3DO's ill-fated 64-bit technology would not ever make it into the homes of Japanese or Western gamers in the form that was intended. Finally, Matsushita Industrial president, Yoichi Morishita, announced in late July that the technology would be used in a set-top multi-format unit similar to the plan for the ill-fated Pippen. The



reasons cited for the decision include the impressive strength of Sony in the videogame market, and a hardware specification that would have had difficulty competing with forthcoming consoles from rival companies.

This news should come as little surprise to those who have closely monitored the development of the format. For more than a year there

has been little noise made by the consumer electronics giant and many industry pundits have suspected that things were not going according to plan. Prospective M2 developer Rob Povey at Boss Game Studios echoed this viewpoint. "It doesn't surprise me a great deal but I have to say I'm a little disappointed. Matsushita would hardly have been in a strong software position if they had released — even if the first round of games had been excellent. Where were the second and third round games coming from? Their reluctance to talk to and reassure third party developers on their plans for the platform (outside of Warp, Capcom and Konami, it is assumed) would have left them with a lack of software after their initial



The 3DO Company, developers of the iM2 racing game, seemed unaware of the format's cancellation when contacted by **Next Generation**. Was their recent demo to build hype for a possible PC port in 1998?

July '96 NG editors uncover the world's first details on Bulldog, Matsushita's original development codename.

Sept '96 3DO confirms existence of bulldog and announces another "M2 accelerator" and the use of a PowerPC CPU.

Nov '96 3DO leads Trix suggests M2's performance is substantially more than 1 million polygons/sec.

Mar '97 M2 exhibits updated specs; Matsushita is declared the first M2 hardware licensee.

Apr '97 Rumors abound about the involvement of Philips and Japanese heavyweights Konami and Capcom in M2.

May '97 M2 strategy officially unveiled in New York one month prior to E3; Infamous pre-mediated racing game "Street" presented.

June '97 The first E3 show is the venue for the M2 hype.

Machine to start is names. Hardware mock-ups and silicon are shown behind closed doors.

July '97 Development kits made available to select third parties; 15 titles confirmed to be in development, 21 of which are "AAA titles" according to a 3DO source.

Sept '97 NG meets Dave Needles and R.J. Mical, who head up the M2 development teams. A stand-alone M2 console is promised for '98/-'99.

Oct '97 M2 blueprints cost \$200,000/million as Matsushita picks up the rights to the technology; 3DO commits to software-only strategy.

Feb '98 Rumors fly around the Net linking Sega to M2. The Japanese company takes a development studio for evaluation.

Apr '98 Sega denies coexistence with M2 and is overwhelmed with dev kits; Konami signs up as first arcade licensee.

July '98 Matsushita ramps up the power of M2's technology by adding a second PowerPC 603.

Aug '98 NG visits Panasonic Wonderland in Tokyo where the M2 console is being developed. A January '97 launch announcement is predicted.

Jan '99 UK developer Perceptons unveils work on its M2 game, Power Crystal, while Matsushita officially hints at delaying its launch plans.

May '99 NG receives confirmation from M2 insiders: the project is officially canceled.

July '99 no official announcement is made by Matsushita president, Yoschi Morishita for plans to use M2 technology in multi-media set similar to the failed CD-i or Pippin units.



Warp's grand-looking D2 might be PC-bound — a Saturn conversion looks unfeasible.

releases, which would probably have condemned the platform in the long term anyway."

While those who sat on the fence throughout the machine's development can thank their consciences for being prudent, there's no denying that this decision represents a final kick in the teeth for those who stood by the format during its testing problems. Committed Japanese developer Warp certainly has the most at stake. The company's real-time 3D adventure game, D2, has been in development since the very first M2 development kits were released by the 3DO Company over two years ago, and this news leaves boss Kenji Eno with little choice but to consider porting the title to a 32-bit console or perhaps even the PC.

A similar course of action seems likely for other known M2 titles in development such as Power Crystal (NG 29) and Studio 3DO's M2 Racing.

The latter was a title that originally lead the M2 hype charge and was revealed to U.S. game magazines recently, probably in an effort to draw attention to the title and to secure conversion rights for the aborted project. However, when NG contacted the developer for a comment about the move, the company denied all knowledge of the cancellation. As for Hull-based Perceptons, NG was unable to contact the company for a comment on the situation.

While all plans for a dedicated gaming console incarnation of the M2 technology have been abandoned, its implementation in the arcade is continuing. Despite Panasonic's plans to play down Konami's use of the M2 technology in its Polystars coin-op, the arcade company is expecting to release another polygon-based game soon. Capcom will follow suit with a 3D beat 'em up shortly after, it's also possible that titles in development for the console could still be ported to the arcade board.

With its interminable development delays, M2's perceived advantages over the competition have naturally suffered at the hands of time. With Sega and Sony already well into the development of their own second generation of superconsoles, the most Matsushita could have hoped for was a technological lead of about a year before more powerful machines would have eclipsed it. A likely destination for the complete M2 technology could be a 3D card for the PC, although other consumer goods employing the technology cannot be ruled out.

Considering the sheer worldwide market presence of Matsushita, it seems likely that a new strategy using the experience assimilated

from its work on M2 will be used to formulate a brand new videogaming agenda — NG has already heard rumors of a much higher hardware specification and one that probably also encompasses DVD and Internet initiatives. What does seem clear, though, is that the company has realized that it will need a footloose launch strategy if it is to stand a chance against the vast market share currently enjoyed by Sony. M2 in its current form clearly was not up to the job.

This turn of events ultimately places Matsushita in a difficult position. There is the embarrassment felt toward the third parties that have committed precious resources to developing titles, and there is the technology itself that could go to waste — a crying shame after so many promises. Matsushita may be able to stomach the enormous losses involved in the decision, but this will be no compensation for the third parties who now face the biggest obstacle of all: a console consigned to the shelf.

ng



Hopefully, the M2 hardware used to produce amazing effects in the unreleased D2 will end up in at least some arcade machines.

What is it?

This pioneering hand-held console featured 16 color graphics (from a palette of 4096), eight-person multiplayer options and had hardware-based scaling. It also boasts some of the best arcade conversions of its day. It was designed at software house Epyx and released in 1990.

New Tech: Tools to die for

New software toolkits nearly bring game creation to the masses

Game creation has always been a high-tech affair, and as such has always attracted high-tech geeks. This goes a long way toward explaining why the majority of game content has always fallen into the science fiction or fantasy genres, the favorite stomping ground of the computer literate who created content simultaneously with programming game engines. But as games have become increasingly sophisticated, so have the tools available to developers. With this increasing sophistication, however, has come increasing ease of use, and in the last few years this has come closer and closer to bringing content creation within the grasp of those who can barely code at all.

That's the idea behind Newfire, founded in 1995 by Alan Wootton, formerly with Adlibs, and Martin Hess,

formerly of Apple. Nearing release as Next Generation went to press, Newfire's line includes two software packages, Catalyst and Torch. Torch is a relatively fast, real-time 3D game engine — "It runs within 10% of the performance of the top engines out there," boasts Wootton — while Catalyst is the toolkit for creating environments within it.

The interesting thing about Newfire's approach is that Torch actually runs as a plug-in for either Netscape or Microsoft Explorer under



Motion Factory's "Jack" demo shows off the Motivate software with a fully Independent giant.

Win95 or Win NT, and Catalyst uses VRML 2.0 standards for object formats, and Java for all and object-behavior scripting. While objects must be created elsewhere, such as 3D Studio MAX or Lightwave, the game

It is...

The Atari Lynx. Epyx's engineers were so upset when the system was sold to Atari they left the company, eventually hooking up with Trip Hawkins and leading development on 3DO. The Lynx, with pathetic software and marketing support from Atari, lost to Game Boy



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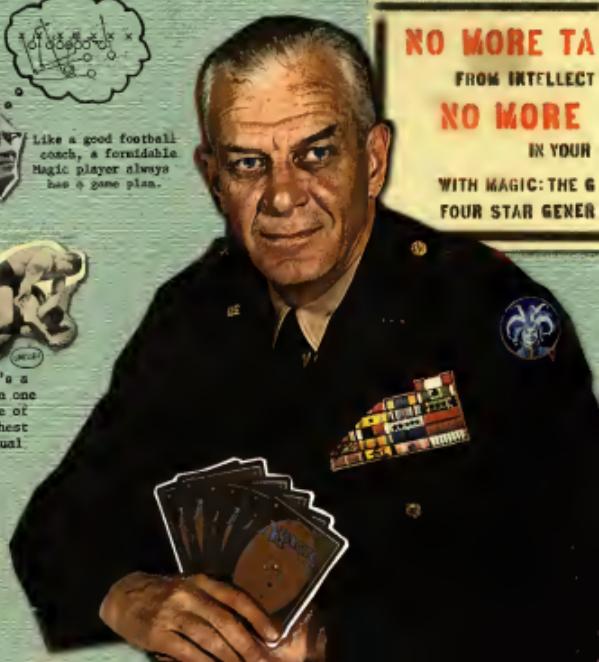
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QUEEN

MAGE



creation interface is point-and-click, drag-and-drop, allowing real-time playback of the game as it is written. Further, the whole system is, as these things go, incredibly cheap: MSRP for Catalyst is currently aimed at \$1995.

Pepper's Ghost is an English company known for its avatar creation software for use with VRML worlds, should also have a suite of tools available later this year. It is divided into three modules, one for the "screenplay" one for animation and direction, and the last for adding interaction. The set is mostly geared towards producing either non-interactive 3D "movies," or the kind of multiple-branching, conversation tree style graphic adventure which seem on the verge of dying out. Still, the beauty of the system is that it requires no coding knowledge whatsoever.

Perhaps the most exciting toolset on the horizon, due to ship sometime by the end of the year, is Motivate from Motion Factory. Billed as the "Intelligent Digital Actor System," the thought behind the package is that game design has reached the point of fully interactive 3D; but what is there to interact with? Based on some eight years of research in robotics and six

years in process control (complex routing systems such as electric power grids and phone-switching systems), Motivate is a suite of tools which allow users to create highly complex systems of character behavior in the simplest way possible, automating much of the process and allowing designers to concentrate on the effects of AI, rather than the process of programming it.

It's becoming easier for non-programmers to create content

Motivate supports 3DS MAX and DXF object formats directly, and once the character model is imported, the designer begins by defining a very simple series of actions, which are called "sets" within the program. Skills can be defined as simply as animating two keyframes of extending an arm and calling it "grab." Motivate uses a proprietary scripting language called Piccolo, whose syntax and usage is extremely close to Java or Visual Basic. Although there is some scripting, most scripts are short enough that little elegance is needed in the code. The scripts, model

hierarchies, and animations are then arranged within an icon-based, point-and-click interface in a flowchart-like "Behavior Machine."

The process, at least as demonstrated to *Next Generation*, appears remarkable. Motivate's built-in IK enables the character to "know" the limits of its own physiology. Using the above example, when instructed to "grab" an object, the object's

location was immaterial, on a shelf or tabletop, on the floor or across the room, the character simply understood the correct way to extend

its arm and touch the object.

What all this means, however, is that it's becoming increasingly easy for non-programmers to develop content, potentially opening the field to a more diverse range of creative influences, approaches, and subjects. Catalyst and Torch, in particular, show the promise of reviving "garage" projects, since its low cost puts it in reach of enthusiasts (or small groups of enthusiasts) with grand visions but minimal computer savvy. Watch for full hands-on reports in upcoming editions of *NG's* "Toolbox" over the coming months.



Motivate's interface is almost completely mouse-driven

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breaking

Macintosh: Not dead yet

The performance of key PC ports demonstrates the Mac's continuing viability as a game platform

Anyone who says you can't make money with Mac games is dead wrong, says Peter Tamte, VP of GT Interactive's MacSoft division. *Duke Nukem 3D* for Mac made a profit its first day on store shelves, he says. In the five weeks Mac *Duke*'s been available, 52% of orders are for replenishing store shelves, he reports.

Tamte expects Mac *Quake*, slated to release August 1, to do nearly as well. MacSoft will also release ports of *Civitavon II*, *Master of Orion II*, *Unreal* and *Shadow Warrior*. The preorders for *Quake* have already paid off for the production costs. Craig Fryar, creator of the classic *Spectre*, and one of Macintosh's strongest proponents, describes the publisher's situation. "That's all they need to know, is can they make money," Fryar says.

And *Quake* will look good on the Macintosh, thanks to Techworks and 3Dfx. At E3, the two companies unveiled the Power3D accelerator, based on 3Dfx's Voodoo technology. There are over 50 Mac titles in development for the card, including surprise sellers such as *Umesh*, *Mechwarrior 2*, *Falcon 4.0*, *MDK*, and *Dark Vengeance*.

Porting high-profile, proven sellers on the PC side to a ready-made pool of buyers seems to be a smart philosophy for MacSoft. The company's recent Mac-only releases, *Prime Target* and *Damage Incorporated* are not faring as well. "With Mac-only titles we definitely have problems," Tamte says. "Retailers are still very apprehensive about the Mac market."

Other Mac-only games aren't so lucky, either. *Amber*, an adventure game released late last year by Changeling, received stellar reviews, yet had disappointing sales. Company president Jeanne DeSocio attributes the problem to difficulties in getting the product in the retail channel, saying that retailers only pick up ports of A+ PC titles, or past best sellers. Retailers also expect titles to sell through in 60 days, she says, while "in our experience for the Mac, there's a year and a half pull-through" in what turns out to be a self-fulfilling prophecy. "The perception is that the Mac's a dead market," she says.

Changeling currently is beta-testing space-arcade game *Ares*, but DeSocio is apprehensive about its chance at shelf space. Tamte doesn't consider distribution issues the primary problem. "I would say the critical issue is the installed base of Power Macintoshes," he says. Power Mac sales have been increasing recently, and Tamte remains optimistic. "I'm very encouraged about Mac right now," Tamte says. "June was a good month for Mac retailers."

But is a top seller in the Mac market enough to make money? PC Data reports show The LucasArts Macintosh Archives Vol. II Star Wars Collection was the platform's top selling game for March through May of this year, but total units sold during those months are only slightly over 15,000 units. Though he declined to give an exact unit count, Tamte claims that Duke Nukem sales for just its first five weeks are at least double that figure.



in the studio

Development news as it develops

Boss Games Studios has announced its second N64 title, *Twisted Edge Snowboarding*. Just entering development, this racing game pits snowboarders against each other on extreme mountain courses. Boss will be recycling much of the code from its first N64 game, *Top Gear Rally*. And like *Top Gear Rally*, *Twisted Edge* will be published by Kemco. Expect to see it in stores during the first quarter of '98.



MicroProse has secured the rights to develop a *Starship Troopers* game for the PC. Based on the popular Robert Heinlein novel and sci-fi film of the same name,

Troopers follows a group of future soldiers who battle swarms of giant alien insects. It is unclear at this time what genre the game will fall into. However, the action flick due this November, while the game is scheduled for a '98 release.

Tecmo's Model 2 arcade fighter, *Dead or Alive*, is coming to Saturn and PlayStation. The arcade version's characters, moves, and overall graphical effects are on par with *Virtua Fighter 2*. How well the home conversions will fare has yet to be seen.

More *Duke Nukem*? Little is known about the project, but GT Interactive has developed *N-Space* working on a Duke licensed third-person action title for the PlayStation. Perhaps due to the similarity in perspective to another hot third-person adventure, the game has internally been nicknamed "*Duke Raider*." It will more likely be a mid-'98 release.

Return of the Neo-Geo? The stunning Hyper Neo-Geo 64, arcade system from SNK is on test in Japan right now, and US gamers should see arcade units show up by the holidays. Look for a full alpha next month.

Pulse, of *Bed of Mojo* roach fame, has secured the rights to the fascinating A-Life game *AquaZone*. The game is a total fish-tank simulation, and should appeal to fans of A-Life and virtual pets.

While EA may hold the NASCAR license, ASC has signed NASCAR racing sensation Jeff Gordon to endorse an upcoming racing title. (Gordon is currently the '97 circuit's leading money winner). According to ASC, Gordon is a gaming enthusiast who is not just lending his name to the title; he will be a consultant in the game's development from the design point onward.



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breaking

PlayStation's Missing Thunder

They're rumbling away in Japan, but Sony's US Dual Analog Pad will ship without feedback



Playing catch-up? Sony's Dual Analog Control Pad (right) now offers the analog control capability that shipped with Nintendo 64.

Sony has revealed that it has cut the vibrating feedback from its US Dual Analog Control Pad, and plans on releasing the controller "sans shakes" this September. Rally Cross (from Sony's first-party San Diego studio) supports the vibration API, as do Japanese titles Bushido Blade and Total #2, which work with the already available, feedback-enabled, Japanese controller.

So why kill the good vibes? The

It is highly plausible that feedback became a price issue

official story, according to a Sony spokesperson, is that "We evaluated all the features and decided, for manufacturing reasons, that what was most important to gamers was the analog feature."

What's that mean? One developer's theory is that "repeated use of the force-feedback breaks the controller's inner components." Another thinks manufacturing issues are a smoke screen and that, "Legally, Sony's very cautious, and is afraid of patent infringement on Nintendo's Jolt Pack." However, a spokesperson for Nintendo assured *Next*

Generation that Nintendo had not taken any legal action against Sony whatsoever.

The best theory makes a simple yet highly plausible argument: especially given Sony's stated manufacturing concerns: feedback became a price issue. To understand this, it is necessary take a step back, and consider the design of the controller. The main purpose of the new controller is to give users the full range of controls analog offers over the current standard digital directional pad. To keep the price down, and encourage people to buy it, Sony made a decision to scrap the feedback, or so the theory goes.

Why is analog control so important to Sony? A look at N64 makes it obvious. The packed-in N64 analog controller enabled Mario 64 to become the best-controlling 3D adventure of all time. Analog control is, simply put, the best input device for navigating 3D environments.

In an effort to extinguish some of Mario's fire, Sony plans to release a number of titles this fall to support this new analog pad, most notably 3D platformers like Crash Bandicoot 2, and Blast. Other third party support is coming via Crystal

Dynamics's Gex: Enter the Gecko, Fox Interactive's Croc, EA's ReBoot, and Namco's Pac-Man: Ghost Zone. But it's going to take more than a few action titles to convince PlayStation owners to upgrade their controllers, and in trying to convince third party developers and publishers to support the Dual Analog Control Pad, Sony is going to have to make the controller available at a very reasonable price — especially if a decision is made (as we expect) to pack-in the analog controller with the PlayStation.

Still, anyone who has experienced the true force feedback technology that is making its way onto the PC (via Immersion and Microsoft) realizes Nintendo's Jolt Pack and Sony's Japan's vibrating analog controller are Neanderthal in comparison. As gimmicky as they are, though, these low-budget tactile feedback designs are the first for console systems, and subsequently, are the foundation for future console force feedback experiences.

It's unfortunate for the U.S. audience to lose feedback, but hardcore enthusiasts who play import titles can simply get Japan's Dual Analog Control Pad (we paid \$40 from one importer).



As seen in the Rally Cross menu, feedback was meant to come to the US

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- Next Generation Online

Movers and shakers

The business news that affects the games you play

This month we've traded the newswire / bottomline format for an in-depth look at some of the fallout from June's E3 show.

Sega on the Threshold

Only the videogame industry could concoct an annual showpiece in which the most exciting exhibit was also the least impressive. We're talking about the Sega booth.

Sega's booth was a trembling Carthage to Sony's imperious Rome. It was sad Alderon to Nintendo's rampaging Death Star. It looked like the home of a dishevelled company lost in dark dismay and confusion.

PC sports games jostled with Saturn platformers mingled with NetLink gadgets which mixed it with arcade hits. The message was: "We have no message. We have lost our way." What a mess.

But underneath all that bizarre and swaying pointlessness rumbles a quiet but highly attractive rage. It is Sega's potential which makes it the most exciting company in videogaming right now.

This silent energy is born of the knowledge that Sega's next foray into the hardware markets will be its last chance for glory. If Sega is not on the front pages this time next year, it will surely be found in the obituaries.

Much has been made online about what Black Belt will be. But there's been precious little mention of when it will be. Sega-watchers are privately convinced that the company will make its next generation attack on the market some time in 1998; that the new machine will be on display this time next year, and that it will be available at Christmas. It's time to start talking up Black Belt like it's going to be the next big thing in games.

Sega has been searing with utter fury at the fashion in which it has been humiliated by Sony. The history of Saturn — not including development houses in Japan, where it still holds a comfortable niche — has been one of incompetence. By contrast, the PlayStation story is a model of smart marketing, decent product, and ferocious organization.

Sega has had enough. It is currently planning the new generation, but without the screw-ups. This time it holds certain weapons, all of which have been paid for with the dear currency of experience.

The first will be the ease with which games can be developed for the machine, thanks to its

PC accelerator-based technology (at press time, some form of NEC's PowerVR chipset is the front runner, although 3Dfx's Voodoo is still in contention). Third parties relish Sega's eminently smart approach to bringing the PC and the console closer together.

Second is a new ad agency, and the memory of that awful ad campaign back in '95 which launched Saturn. Sega is not coming into this round with the residual arrogance of the early 1990s. Expect some of the marketing which made it great in '98.

Third is a self-proclaimed ability to get it right where others have got it wrong. If there is a criticism of PlayStation, it's the menage of poor games. If there is one of Nintendo, it's the shortage of good games — indeed, many games at all. Sega knows it can make good games, and it says it can deliver the right mix from both first party and third party sources. The company has relentlessly sliced back its release schedule for '97 (admittedly this has been forced by circumstance) and a quick look down its schedule yields a high percentage of A and B games, with plenty of resources left over to commit to a new platform.

Fourth is a growing presence in the PC market and in the online market. At the moment Sega is weak in both areas, but it is there, and it is growing. Yet the essential truth is that Sega has an online strategy in the first place, which is more than can be said of its more focused competitors. No one is sure exactly how these interests will benefit the new platform, but some benefit is almost certain.

Fifth is the "wait and see" factor. Unlike the launch of Saturn in '95, there are no obvious new platforms looming on the horizon. PlayStation's roaring success makes a

by Colin Campbell

Colin Campbell is
Next Generation's
International Correspondent



Crib sheet

Stuff every gamer should know. This month, it's hip to be Square.

No. 13 Squaresoft

Squaresoft? Never heard of 'em. Get out from under that rock and listen. Square has been the leader in console RPGs for ten years now. It has produced such 16-bit classics as *Chrono Trigger*, the *Seiken Densetsu* series (known in the U.S. as *Final Fantasy Adventure* and *Secret of Mana* I and II), and, of course, the *Final Fantasy* series, which has sold millions of copies worldwide. What about 32-bit games? Well, its first, *Tobal No. 1*, wasn't very successful (it owes its Japanese success to the *Final Fantasy VII* demo handled by I.D.), but the follow-up, the weapons sim *RushMo Blade*, was a five star game. *Final Fantasy VII* has already sold three million copies in Japan, and *Final Fantasy Tactics*, its *Vandal Hearts*-style strategy RPG, will most likely sell just as many. Okay, so I've seen *Final Fantasy I*, II, and III. Why is the new one called VII? Because the others never saw a U.S. release. *Final Fantasy VI* is really *Final Fantasy IV*, and IV is really VII. VII is VII, though. This is rather confusing. If the first one was called "Final" Fantasy, why are they working on the eighth? Don't ask; it's a Japanese thing, you wouldn't understand.



Final Fantasy has gone from primitive graphics (top) to 3D (above), without losing any of its world conquering gameplay.



Sega's booth had plenty of energy — if only it was directed in some coherent direction

sequel hard to imagine in the short term (and Sony has a looming "sophomore album" syndrome on its hands). Nintendo 64 is still a wee pup, and given Nintendo's track record, it will be the fast company to release a new machine.

Black Belt could be state of the art through the last year of this Millennium, and likely into the first year of the next. Welcome back Sega.

Size matters

Two things were missing from E3. Small publishers and very big publishers. The show was completely dominated by companies which are large (but not too large), and which boast a firm base in the videogame industry.

For the first time since the hey-hoony-nomy 16-bit days, super entertainment behemoths such as Time Warner and Universal stayed at home. Judging by what they brought to previous events, this can only be judged as a good thing. Only Fox is still in the chase, and cynics are already suggesting that its best games are behind it.

Likewise, there were no small publishers in the main hall. Maxis sported its own stand, but it will become part of EA's world next year following their well-fitted "merger." Likewise, Singletrac has likely shown the way of the future for ambitious, talented development houses that wish to become publishers. Realizing the scale of going it alone, the company opted to become part of a publisher instead (XGI). While this is probably good for GT and Singletrac, the trend is perhaps not so promising for the industry as a whole. Small publishers are a good thing.

Making Media Work

One of the unsung triumphs of E3 was Eidos' proven ability to deal with the new realities of the media. The company organized exclusives

not only with monthly magazines, but also with daily websites. All was prettily designed to coincide with the show.

In terms of depth, the website content differed vastly from magazine content, with websites granting the bulk of the sound bites, and print receiving loads of pictures. Yet each was appropriate to the given medium. It was a smart move.

Many online magazines have not endeared themselves to industry publicists because, by definition, they operate outside the realm of monthly deadlines. But instead of taking the professional Eidos approach, too many have resorted to conflict. There has even been some fatuous posturing along the lines of "they need us more than we need them".

At best, this shows a misunderstanding of the press function. At worse it betrays contempt.

Atlanta Blues

A final note about E3 '97: going by the numbers, it was a dismal letdown. Given the added expense and trouble incurred by shipping the West-coast-heavy videogame industry some 3000 miles east, it's perhaps unsurprising that attendance was down 33% from the previous year in L.A. Although the main show floor was huge, it was long, narrow and difficult to navigate. And still, many companies consigned to the secondary Georgia Dome site packed up and left early due to the emptiness of the Dome, and may not return for '98.

Combined with the deadly Southern humidity, the ISDA, which runs E3, may find a deathly empty building next year.



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Gaming on the Internet

Almost every week, someone calls me claiming that, "our company is going to change online gaming," or, "our new online game is unlike anything you've ever seen before." Inevitably, the games in question tend to be mutations of existing genres or simple multiplayer hacks for what were essentially single player games to begin with. To sum up, usually disappointing.

Recently, one such company did not disappoint. In fact, it's building a number of

The results are amazing. For once it's true: no one has done it this way before

interesting elements into a fairly basic game, and the results are amazing. For once it's true, no one has done it this way before.

That company is Multitude and the game in question is *FireTeam*. The game is being designed by Ned Lerner (Ultima Underworld, *Art Mino* (*Terra Nova*) and James Morris (creator of the M2 graphics libraries, tools, and operating system). The company's chairman is Jim Whirles, executive vice-president of Sony during the launch of PlayStation.

The game could best be summed up as a real-time X-COM, in which each person controls a single character in an isometric environment (for more on the gameplay, see the *FireTeam* Alpha on page 78).

Multitude's servers will perform automatic team and individual stat tracking, and provide ladder rankings on the fly. As people hold given positions on ladder rankings, they will be able to occasionally use "special" characters, some with better weapons, more stealth, heavier armor, or omniscience (the ability to see everything on screen instead of just their field of view). Such a dynamic element is unlike almost anything else in online gaming today, and will almost certainly be copied in the future. The most impressive feature, though, may be the voice technology, which enables players to speak to each other — without voice modems.

When playing the game in a two-on-two match-up of the most simple version, "capture the flag," communication between players is essential. Calls of "I'm heading around the corner to the left, cover around the right corner and we'll converge at the flag," are the norm. Teammates call for help as they are double-teamed, and the adrenaline rushes as one runs to the other side of the level to try and assist teammates who have run into trouble. The voice element is as integral to the suspense and rush as the gameplay.

While the guys at Multitude admit that initially people may have trouble stepping up to the task of interacting with strangers, they believe the advantages offered to gamers who use microphones (which will be included with the planned retail component) over those who do not will force people into the voice modes. The voice support autoselects when something is said into the microphone, so there is a button to push or anything to get in the way of fast communications. Imagine playing Quake (in all of

its team form) this way — awesome.

Multitude has patented portions of its voice technology and already the company is being approached to license it to others. The technology is primarily based on the client side, with the server itself not decompressing any of the voice data. Instead, all the server does is decide which of the other clients should receive the voice streams and the client does all of the mixing. Breaking players into squads or teams greatly reduced the number of voices needed downstream. As a result, players usually only speak with their teammates, but it is possible to change your broadcast so that you are speaking to a specific player, or to the opposing team.

The Multitude technology is also codec independent; in demos, *FireTeam* has been shown running using the LNU codec, but it's also

The voice element is as integral to the suspense and the rush as the gameplay

used a Voxware codec as well. The team at Multitude felt that while Voxware offered the best compression, it also had the least desirable sound quality. As a result, Multitude is likely to devise its own codec, which will deliver superior results as well as save on licensing fees.

On the business side, *FireTeam* will be distributed via a retail package, expected to cost between \$20 to \$30. With that package people will receive a set of headphones and mike, as well as some amount of free time on the service. The service itself will be based on cost per time, but whether the billing period will be days or months has yet to be decided. Additional revenue will be generated via advertising, but there is another twist as well to Multitude's revenue schemes and gameplay attraction.

Multitude has asserted that an entirely new game can be built using its engine in one to two

by Christian Svensson

Christian Svensson is the editor of *Next Generation Online*



weeks. As an example, the team demonstrated a *Jurassic Park*-type game, in which one team was a bunch of raptors trying to escape from an island, while the other was a group of dinosaur hunters. The futuristic tunnels and "capture the flag"-type game shown earlier was completely replaced with a jungle and pyramid scheme that was entirely different. New characters, weapons, and play mechanics (via a complex scripting language and simple GUI file editor) enabled the creation of that game in less than a week. As an interesting side note, the editor and the scripting language will be released to the public for people to design their own mods.

According to Ned Lerner, the company could do variants based upon single episodes of the "X-Files" or other television shows. So if Fox wanted to promote a given series every week, instead of simply watching Mulder and his FBI team exploring a UFO, you and your team could be doing it the next week. Logically, Fox would pay for the opportunity to promote their series in such a fashion. Likewise if a movie studio wanted to promote

its newest action movie, Multitude could have a special version of the game prepared for them well in advance of the opening weekend (it would certainly beat the silly live games that simply overcrowd so many movie web sites). The major advantage for Multitude and its potential contractors in this situation is the timeliness of the game.

On another side note, the design team indicated the ability to even look to current events to inspire new elements. So you think going into the Japanese embassy to rescue the hostages should have been done sooner? How about a complete model of the embassy provided for your entertainment complete with hostages, terrorists, and SWAT teams to satisfy your desire for justice? The possibilities here are nearly limitless. If promoted correctly, so is the revenue.





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Arcadia

The latest arcade and coin-op news

A Work of Art

You won't ask "who needs another fighting game" when you get a look at *Mace: The Dark Age*, Atari's powerful new 3D fighting game with a rich medieval theme. Two years were spent making sure this title stands out from the pack, and six months ago, a rough version of *Mace* in Atari's R&D department knocked our socks off. One of the most visually spectacular games we've ever seen, it uses hardware based on 3Dfx's Voodoo chipset (the same technology that powers Atari's *San Francisco Rush*).

Mace features 10 player-selectable characters and two bosses. Six more hidden characters are on the roster, most of which will be time-released to keep players coming back.



Atari Games' *Mace* pushes the envelope in arcade 3D fighting

Mace has a number of innovative features, including complete 3D character movement; true multi-level playfields with ledges, steps, and ramps that characters can walk, run, and fight on; dangerous arena boundaries such as lava, quicksand, fire, spikes, and deep water which characters can wade through or fall into; and interactive and throwable playfield objects such as tents, urns and tables. Each character gets a secret finishing move, too. Get info about local tournaments (plus tips and playing secrets) by checking out the *Mace* page on the Internet— which can be found within www.atarigames.com.

Atari, Past & Future

Atari Games, the company that started the arcade and home video industries, marked its 25th anniversary on July 27, 1997. Its first product was *Pong*. Dan Van Elderen started with Atari as a young engineer fresh out of college and he's been with Atari ever since. For the past three

years, he's served as the company's president. "Dan Van," as friends call him, is pleased to helm a company that's enjoying a huge renaissance, due in no small part to his leadership, according to many longtime Atarians.

"San Francisco Rush looks like it will probably be our most successful driving game ever—and we've had a lot of them." Dan Van says with a smile. He reports that the current arcade game product development cycle runs 12 to 18 months, and the cost to develop a single product is typically \$2 million. "With creative barriers to compete in this industry so high, it's unlikely we'll see another new coin-op video game manufacturing company entering the market."

Dan Van expects that, "Networking and interconnectivity will spur the next big phase of growth and public interest in arcades. We're probably five years away from broadly using the type of technology becomes economically feasible. We're doing the R&D on it now, and we're learning our way into it."

Regardless of which direction it eventually takes, Atari's president remains confident that arcades will always have a place in the entertainment universe. "It's inherently part of our society, a segment with a proven and permanent role to play," he declared. "People have always wanted and needed

out-of-home entertainment, and they like that entertainment to have interactive, hi-tech components. So long as that need exists—and, as I say, I believe it's permanent—then somebody will figure out a way to fulfill it. Atari Games plans to be one of the 'somebodies' who does this!"

Sega Finds The Lost World

Next Generation raved about Sega's forthcoming arcade video, *Jurassic Park: The Lost World*, which was arguably the most exciting thing at the E3 Show in mid-June. The game is a shooting experience for two players, featuring a "theater style" cabinet with 50-inch monitor, two guns, and four-speaker surround sound. Spectacular 3D graphics (achieved via Segri's Model 3 board) do justice to the film's dinosaurs.

Gameplay faithfully mirrors the movie's plot (with some new adventures thrown in). As a nice non-violent touch, the gun is loaded with tranquilizers, not bullets, and the score depends

by Marcus Webb



Marcus Webb is the editor of *RePlay* magazine

on how many lives you save. A team work rating at the end of the game is another new feature to challenge players' skills.

How good is *Lost World*? Some rival companies privately admitted: "This game is so exciting, it could have become a hit even without the licensed property behind it." As this column went to press, Sega didn't have a release date for *Lost World*, but you can bet eager gamers will be calling Sega five times a day to find out.

More CD Games Aimed at Arcades

Microsoft, Intel and their allies aren't the only companies pushing the idea of coin-op games on CD-ROM. One or two smaller companies are promoting the same basic concept and a similar approach. Are these upstarts trying to steal Microsoft's and Intel's thunder? Or, are they jumping aboard the Microsoft/Intel bandwagon? Decide for yourself.

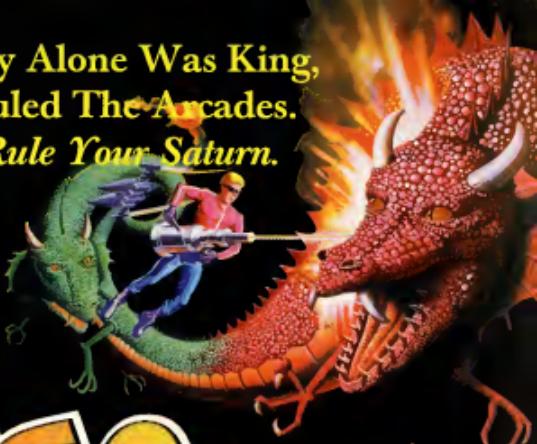
One of these is a startup company out of Philadelphia called Network Entertainment Game Systems (NEG). They are starting with existing proven hits from the home game market—figuring that millions of kids don't have computers at home and have would love to play these hot titles, but never had a chance before. Later on, the company intends to offer brand-new titles, designed specifically to debut on their arcade platform. They also say their system will offer the capability to link games into a network via modem for tournament play.

Specs include: 180MHz processors, 32MB RAM and advanced 3D accelerator cards, all upgradable. Prime Target by MacSoft is its first game, it's a first-person 3D game in which the player gets a chance to save the government from a violent takeover. There are 25 levels, nine different weapons, and the usual hordes of villains who come looking for you. It's been testing in a Philadelphia-area Champions Arcade for some time and should be appearing in more arcades by the time this is published. For follow-ups, NEG says it has a flying-dogfight game and several others in the pipeline.



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breaking

Online gaming explodes—again

A tidal wave of multiplayer online gaming crashes at E3



Game Gateway, E-Online, and Aliens Online were a few of the new products.

This year's E3, notable for its lack of later titles, was remarkable for the sheer volume of online gaming services launched. None of them is likely to make Multiplayer or TEN nervous for quite some time, but the fact that there are so many choices should at least make the two giants look over their shoulders.

The biggest online news was the launch of the Game Gateway, a joint venture of

Concentric, Engage, Kesma, Infogames, and Online PLC. The service will consist of a hybrid of the most popular titles from each company, including Warcraft II, Castles II, Legends of Kesma, and many others.

Kesma also inked a deal with Fox Interactive to help develop Aliens Online, an online version of Fox's Aliens vs. Predator (see preview next issue). The online version will feature multiplayer contests with as many as 100 combatants at a time; players will be able to control either the aliens or the marines.

With the addition of other online services, such as E-Online

and WorldPlay, the online gaming market is becoming as saturated as the first-person shoot-em-up genre, and nearly as fragmented. Currently, gamers who want to play all their favorite titles online have to subscribe to all of the major services (Engage, TEN, Multiplayer, Duke Nukem 3D, for example, is only available on TEN; the same holds true with Warcraft II on Engage).

It seems clear that there is room for at least one (and probably more) major online game service, but with so many entrants — each with only one or two exclusives — a clear leader is unlikely to appear before mid-1998.



Nintendo Arcade System Nearly Complete

Seta finally reveals N64-based arcade board in Tokyo

After a full year after Seta announced that it was working on a Nintendo arcade board, its project has reached the final development stages.

Seta, known for its hardware and development projects for Nintendo, began work last Summer on an arcade board called the ALECK64. The board is an enhanced version of the Nintendo 64 that shares the same MIPS 4300 CPU and

development tools as the home console. After over a year of progress, the board is finally in the last stages of development.

In the past, Seta has been responsible for a variety of Nintendo hardware projects (the company created development tools for all three generations of Nintendo consoles). Already, Seta has begun distribution of the development kits for the new board to arcade companies with plans for over 10,000 units to be sold by the end of the year.

The ALECK64 represents

Nintendo's move back into the arcade market. The company's arcade roots reach all the way back to the early days of the videogames with Donkey Kong, but it hasn't had a game in arcades in over a decade (the Nintendo-labeled *Cruisin' USA* and *Killer Instinct* notwithstanding).

The board may not make it to the US, but will be seen in Japan. The major test of Nintendo's board will be how it compares to the current state of arcade hardware systems. How the games for the system stand up against those made on boards by Sega, Namco and 3Dfx will ultimately decide the fate of the ALECK64.



Seta's board: nearly as simple as an N64's, but note extra RAM

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**Start Taking Notes.
October 1997**

from
concept
to **game**
plan

How to **create** a
design document.

So you've got a game idea, and you just know it's the best thing ever. You've been over the details in your head a million times and there's simply no way around it — this thing is good. So what's the next step?

In the early days games were usually designed on the fly. The designer (who was probably also the producer, programmer, artist and sales team) had an idea and he or she sat down at the computer and started hacking it out. But in today's market where games are infinitely more complex, this kind of approach just isn't practical, if for no other reason than a game designed to today's standards requires a long-term commitment, vast amounts of pre-planning, and of course daunting financial considerations. Try talking a publisher into backing a project that exists nowhere but in your head and you're likely to get laughed out of their office (unless you're already an established name in the industry). Creating a professional design document says to the world that you're serious about getting your game produced and you're willing to prove, on paper, why it deserves to be made.

But a design document does more than give a designer an orderly way to shop their game concept around. A well-crafted design document sharpens the game idea itself. As any designer will readily admit, sometimes the ideas in our heads simply don't work when they're finally put into play in a real game design. Sure, it would be nice if one of the characters in your new fighting game could fly like the eagle he is designed to look like, but in putting the game on paper you may discover that allowing only one of your characters to fly creates a severely unbalanced game. By the same token, putting a game down on paper will often give birth to a host of new ideas by forcing you to think about every aspect of the game, and this is in many ways what is most important about doing a design document. For example, you know what happens in your

fighting game when one character pulls off his special power-up move, but what happens when both characters resort to this move at the same time? It's by thinking about this type of scenario that your game idea will become a deeper and more rounded experience. It's all about thinking it through, planning, organizing, and putting your initial ideas through a feasibility test.

While it may not be the most enjoyable aspect of game design, due to the level of detail required, creating a thorough design document is always a step in the right direction for quality game design. Knowing exactly how to represent your ideas will prove infinitely beneficial to the process of taking that game idea that's been swimming around in your head and bringing it to the PC or television screen. Over the following pages we'll outline what it takes to put together a professional design document — we'll assume you've already got a great game idea. But even if your game never gets made (a likely scenario in today's cutthroat market), going through the process of creating a design document is one of the most positive exercises a prospective game designer can attempt, and the lessons learned are easily carried over into your next project. It's important to understand from the start however, that unlike the movie industry, in which the format for a screenplay is so rigid it even determines what kind of font it's acceptable to use, the game industry does not yet support a single definition of the term "design document." According to Ian Verchen, a senior producer at Radical Entertainment in Vancouver, "There are probably as many different formats for a design document as there are developers and publishers."

Pre-Design Document Work

So you've made the commitment to design your game idea and you're ready to get started on the daunting task of creating a thorough design document. Not so fast! Before you get started it's best to have a few things in order. Since creating a design document is a process of moving from vague ideas to detailed concepts with every step, it is wise to create a smaller scale "design treatment" before getting started on the actual design document.

A design treatment is a self-contained document that outlines in non-specific and non-technical terms what your game is all

A good design treatment is usually no more than one or two pages

about. The concept is based on a similar creature from the movie industry called a movie treatment, where the basic storyline and general requirements are outlined in a short and easily digestible format. And just as a movie treatment is not the same thing as a screenplay, a design treatment is not meant to be as detailed as an actual design document.

What a design treatment will allow you to do is to get your game idea, in its most basic form, to the point where you can start to feel what it will be like on paper. If in doing your treatment you find yourself already doubting the feasibility of your game, it may be time to re-think your idea from the ground up. This is also a great time to have other people look at your idea and make suggestions before you

start down the wrong path on a concept which might have been very cool with just the slightest tweak in direction. Still, don't worry too much if your treatment raises questions that can not be easily answered right away. With experience, you will learn to differentiate those issues that simply require further thought from those that indicate real problems, but for now a few unanswered questions do not necessarily spell tragedy.

A good design treatment is no more than one or two pages, and describes in ambitious terms what your game is about. This is your chance to get people, including yourself, excited about the game, so don't be afraid to make it sound like an earth-shattering experience. On the other hand, it's important to keep your documentation (no matter what the format) clear and focused. It's one thing to get someone excited about your idea, but it's another to lose them in two pages of fluff.

Depending on the game's genre a design treatment should include most if not all of the following elements: a brief description of the storyline, including main character descriptions, settings and scenarios; a general description of the main character's actions (if the game was *Tomb Raider* this is where you would describe Lara running down a corridor shooting bears with two guns at a time); the look of the game (is this a 3D dungeon game with tight, dark corridors or a futuristic adventure game with photo-realistic pre-rendered backgrounds?); a description of the computer AI ("The enemies will search out the main character by the amount of noise he makes and so it pays to be very quiet. When they find him they will surround and overpower him."); a list of development tools which may be required; and finally the team members and skills you will need to make the game. Once the design treatment is in good shape, it's time to get started on the actual design document.



Your Personal Situation

While there are rules that apply to all design documents, the general scope of the document you are about to create should reflect several things about your personal situation and how it relates to the environment in which games are actually produced. If you're already a game tester at a software house, for example, you can probably feel pretty confident that someone with the authority to green light a project is going to actually read your design document. This being the case, you might want to consider creating a document that not only thoroughly pitches your idea (all design documents should meet this minimum requirement), but also leaves room for further development and detail work once your superior has been bowled over by the idea and rewards you with a full development team to help bring out the subtleties.

If, however, you're not currently working in the game industry you're going to have a much tougher time of actually getting someone to look at your document (for legal reasons and otherwise), so your strategy will be slightly different. This is your chance to sell yourself not only as a game designer but as a potential employee. According to Connie Booth, executive producer at Sony, "If you're sending in a design document to a company without wanting to become a full time employee for that company — don't bother." Hence, your design document should reflect the same kind of well-rounded confidence that you would want to portray in a job interview. This means that if there is any single detail that needs considering had better be thoroughly expressed in your design document. A potential publisher is going to want to hire someone who can hit the ground running on day one, and a complete design document may very well prove that you're up to the challenge.

The Design Document

Now that you've done your pre-planning in the form of creating a design treatment and made important decisions about the depth of the document you're about to create based on your personal situation, it's time to get started on the actual document itself. Again, it's important to remember that everyone's definition of a design document is going to be slightly different, and the document explained in the following sections will only match some of those definitions. The following format, however, will be recognized in the industry as one of the many acceptable forms, and should serve to get your foot in the door.

The Essential Elements

What's This Game All About

In many ways, this first section of your design document is the most important of all. The first thing you're going to want potential publishers or marketers or programmers to read, after all, is what kind of game you're thinking about making. This basically means genre, style and technical features. This is also the first time most designers get caught up in the "but my game's not like any other game ever and it doesn't fit into any established genre!" dilemma. Let's face it, it's highly unlikely that your game idea is 100% original, and that's nothing to be ashamed of.



To fall short of describing Lara's two-fisted shooting in the design document would do a serious disservice to the brilliantly conceived animation in the game.



Writing a long and possibly boring backstory for your game may result in a fabulous FMV sequence, but may not make the most interesting content in your design document

While very few publishers are going to get excited about a game that is billed as and designed to be exactly like another existing game, the fact is most publishers will feel more comfortable if your game shares at least some elements with other popular games, and hence mentioning that your main character will be able to drift through the air similar to the character in *MDK* is not necessarily a bad thing. Remember, you're not only trying to get a publisher excited about your idea, you're

It's highly unlikely your idea is 100% original — that's nothing to be ashamed of

also trying to give them the impression that your game can be made. According to John Botti, president of Black Ops, "The point of a design document is to get everyone on the same page," and this first section is essential in trying to achieve that goal.

An easy way to convey your idea as something feasible is to reference all the familiar ideas in your game design right up front. Remember, the original touches in your game will stand out even better when visualized in a familiar context. This can be done in a number of ways, including referencing similar elements in other games by giving them the old "It's like *Xevious* meets *C & C Red Alert*" comparison, or even using illustrations (an important point which we will

be coming back to later) to make a feature clear. If your character runs, jumps, shoots and climbs, now is the time to write it down. This is not the place to talk about the scene in the fourth level where your character must traverse the lava pit to find the hidden blue key, but it is the place to explain how your game will support analog controllers to maintain precise control in sticky situations like lava pits or how the gameplay revolves around mastering your character's sophisticated flying controls.

After reading this section a person who was formerly unfamiliar with your concept should have a very good idea of what kind of game it is. In this way, the opening description of what kind of game you're hoping to make is like the mission statement of your design document. You're basically setting up the rest of the document with this opening section, and if done correctly you'll have a thorough and self-contained description of your game, creating an easy entry point for the reader.

The Story

Writing out the storyline to your game is one of the most dangerous aspects of creating a design document. While it's easy to get carried away writing the back story, this is the one element of your game design that most potential publishers are least interested in. A common guideline when writing the back story is to keep it to nothing more than one page — it can even be as short as one paragraph if that's all it requires. Of course, if your game is something story reliant like an RPG or an adventure game you may have to break free from this guideline. However, it's still better to tell the story in your detailed level descriptions than all up front in a long and potentially tedious backstory. The main goal of the backstory is to set the mood. You're trying to put the game into some kind of context — don't go crazy!

"I see so many design documents that start out 'It was the year 2095 and evil corporations are battling for dwindling mining resources' but what I want to know about is the interaction," suggests Verchere.

Detail by Level

Now it's time to get specific. Up until this point you've been trying to hook the reader with the basic concept of your game idea, but from here on out you should detail the game as thoroughly as possible. However, there are a few things to consider before getting started. Probably the most important thing to think

about is exactly how much of your game can be pre-planned. For example, if you're planning a 3D action/platform game, it's probably going to be impossible for you to plan the exact placement of every jump, firepit and hidden item, as these are all elements that will require play testing and experimentation to get the best results.

What you have to do at this point is decide which elements can be pre-planned and focus on those. On the other hand, it's important to remember that should you be fortunate enough to ever get to make your game, things will change, so don't be afraid to plan out — and write down — certain details just because you think they might have to change. It's better to have a concrete plan going in and have to change it than to not have one at all and just expect things to work out. "We really try to break things down and put even more detail in the design document than will probably end up in the game," says Botti.

The easiest way to create a detailed description of your game is by breaking it down into some kind of manageable sections. Since most games themselves are broken into levels or zones, the break points are typically pretty easy to determine. If you are designing a game that does not adhere to the traditional level format you will need to find some other way of segmenting your game so that you can work with reasonably sized sections. A genre that might not easily adhere to this kind of strategy is an RPG, but even role playing games can be broken down into different geographic sections or chapters of the story. This is important, so be sure to find some way to break things up or you're likely to get into a project which is very difficult to manage.

Once your game is broken into different levels you'll want to start describing in detail how each level will work. This includes how the game looks and acts, in what kind of

environment the action takes place, which characters are involved, and finally what the goal or goals of the level will be. This section should also include seemingly insignificant details such as what happens if the player falls — does he fall flat on his back with blood pouring out of his gut, or does an angel fly out of his body and float through the ceiling? Even if they change in the end, these are the details you will be happy to have thought of when it comes time to actually make the game. You'll also want to document things like alternate paths and potential pitfalls in each level. If you're designing a racing game, for example, you might describe a certain section of the track that features a hidden shortcut and what specific challenges the player will have to overcome to gain access to it.



To begin describing this level in Mario 64, you would first want to give it a name such as "Race With Penguin Stage."

The following list of elements to include in each detailed level/section description is just one possible way to organize your thinking. Depending on the kind of game you're designing, you may find some of these sub-categories, or close variations, will help to think through every aspect of each level's design, and therefore lead to the creation of a well-balanced design document.

General Description of Each Level

Just as the general description of your game is meant to convey an overall impression of the experience, the general description of each level will let the reader know what that level is all about. If it's a level in a game such as Mario 64, you could start by giving the level some kind of name such as the Giant Eel Level. Then you would explain how this level takes place underwater and there is a giant eel around which most of the action takes place. After that, you might write that the ultimate goal of this stage is to collect the star that is attached

to the giant eel's tail. To get the star the player will need to walk above the eel's cave, and when the eel swims out, the player can grab the star. Of course, you'll want to be more detailed in your description of elements such as the eel, the location of its cave, and what you can find in the rest of the level.

Once the main goal of the level has been explained, you should go on to explain more of the environmental elements, pitfalls and play mechanics. For example about that same level of Mario 64 you might write the following description: "Since this is an underwater level the primary color used will be a deep blue. There is also an undulating effect to the water to help sell the sensation of being submerged." Then you might go on to explain that since Mario can not breath underwater he will have to achieve his goals in a hurry, or find the secret supply of air hidden amidst the sea plants on the sea floor. You could also go on to explain how the level will be specifically designed to exploit the limited time factor by including certain enemies that grab hold of Mario, pulling him to the floor of the ocean and giving him less time to achieve his goals.

Finally, it's important to remember this is your opportunity to tell the reader what's important about this level of your game. Your main goal is not only to enable the reader to clearly visualize the level you're designing, but also to tell them why they should care about it. Within the detailed level descriptions this is probably the best opportunity to really sell each level as something exciting and intriguing and so it's important to pick your words carefully in this section. Always remember that the language you use to describe something says a lot about the way you feel about it. If it sounds like you're describing the game in a blasé manner, the reader is likely to pick up on your attitude and adopt it as part of his or her own impression. Don't worry, you'll have plenty



In detailing a certain level of a game, such as a section of a track, it's important to be extremely specific about anything that could be considered important



In a game such as Wing Commander IV which relies heavily on story development, each level description should include specific information on story relevance



Including artwork as part of your design document, such as these examples from Sony's *Mysto*, is often an essential element to a well balanced document.

of time to in the next few sections to list, chart and illustrate your points. In this section, however, don't be afraid to be colorful.

Story Relevance in Each Level

This section of your document will vary greatly depending upon the kind of game you're planning. If you're designing a fighting game, for example, there's not likely to be much to think about insofar as how each fight effects the story of the game. However, in a game such as *Wing Commander IV* each mission works to advance the plotline, and in a carefully constructed game each mission will somehow work together to create, in the end, a large and cohesive story.

This is even more important in an adventure game or RPG, since there are any number of story subtleties that must be developed and exploited. Depending on how

Don't panic if you can't find a good artist. There are still ways to illustrate your ideas

your game is arranged, you may also have to consider the effects of a branching story line. If the player is given the opportunity to set his/her own course through your game, you will have to be ready for all possible choices and what consequences certain choices may carry, and here is the place to work through these considerations.

If you're designing a story-based game, this section is a good place to not only detail some of the characters you'll be meeting in each level and explain their relevance to the

overall game but also to put this "chapter" of the game into the right context. It's easy to write for days about the scene where your character finally finds the secret entrance to the castle and battles the evil emperor's finest soldiers as part of his ultimate victory over the dark side, but if you forget to detail your character's meeting with the old wise man who first informs him about the existence of the secret entrance, then you've left an important hole in your design document.

Of course, this does not mean you need to go on at length about the barmaid who offers your character a pint of ale for one gold coin if that is her only role in the story. It's your game, you know what's important, but never forget that the people reading your design document will not know until you tell them.

Environment of Each Level

Describing the environment in each level is no easy task, but when done right is one of the most important tools available in making other people understand your vision. When you imagine your game you undoubtedly see the world around the action quite clearly in your head. It is your responsibility to explain all this in words (or pictures) so that someone reading your design document can picture roughly the same environment.

There are two main distinctions in describing a game's environment, and these are broken into foreground and background (or possibly even interactive and non-interactive). Some games follow this distinction quite literally, with the end result being typically a static background which sets the overall look of the level, and then the foreground elements which could include anything from floating platforms to banana trees depending on the game. You'll have a chance to describe in greater detail the items in each level and their functionality, but for now you should mainly concern yourself with the appearance of the environments.

This is also a key opportunity to use artwork. The process of obtaining artwork is not always easy. Assuming that you are not an amazing artist to begin with, probably the best thing to do is to team up with an artist who has a real sense of your vision. Don't panic if you can't find the right artist, however. There are still ways to illustrate your ideas. One way is to look for photographs or illustrations in magazines that come close to the kind of environment you're thinking of. For example, if you're planning some kind of deep jungle setting you could look in the latest issue of



A lead character as distinct as that in MOK would need a careful physical description, perhaps including artwork — even sample animation — to explain sufficiently

National Geographic or Travel & Leisure for an image that expresses the right kind of setting for your game. This method may not get you exactly the results you're looking for, but it should at least get you in the right ballpark. Another easy way to illustrate a game's environments is through the use of maps. While a 2D map may not express the look and feel of an environment, it does wonders for giving someone an idea of scope and of the physical relationships between different rooms or areas.

Characters in Each Level

In this section you will let the reader know about all the characters he or she may expect to encounter in a specific level, and there is no specific limit as to how detailed you may choose to be. Depending on the genre, some designers go so far as to keep something fiction writers call a "character bible." A character bible enables the writer to keep a detailed journal about the characters in his book (or game) in an effort to create a believable and consistent personality. However, keep in mind that while you're free to keep such a journal for your own reference, your design document is not the traditional place for this kind of work.

What you will want to express in this section is what characters will be appearing in the level and what they will be doing. This includes everything from attack moves to conversation dialogue. You will also want to be sure to explain how character's actions will be affecting other characters and their

environment. This is another opportunity to touch on the storyline, but again don't go crazy. This is a place for specific examples of what your characters are doing in a specific situation within the level, not what happened to their grandmother's dog Skippy when they were ten years old — that's for the character bible. Finally, you'll want to describe what these characters look like. This includes technical descriptions, such as "this enemy character will be 3D modeled with about 300 Gouraud shaded polygons," as well as more traditional descriptions of appearance. For example, "The enemy character Boo Boo is a Canadian Mounty gone insane. He still wears most of his Mounty uniform, except that now he also wears a pirate hat." Note this is also another great opportunity to include artwork.

Actions/Animations for Each Level

Hopefully, by this time the person reading your design document will have some idea about the kinds of things your character can do. In this section, however, you're going to have to be very specific about all the actions that he/she will be doing in the particular level you're writing about. You'll also have to describe the actions of enemy and ally characters. If, for example, you are describing a boss stage in a 3D action game, it's not enough to say that the main character will jump and shoot the boss in the eye. To the reader who knows nothing about your ideas, this just doesn't say much. If, however, you describe the boss character as a fully polygonal 30 foot tall gorilla with a powerful

sweeping hand gesture which the main character will have to jump over at just the right time, then duck under the explosive wrecked cars and helicopters the gorilla hurls directly at the screen, then you've given the reader a much more vivid picture of the action.

Simply describing the character's actions in generic terms like run, jump and shoot isn't enough. This is your opportunity to describe the animation and artistic style of your characters. When it comes time to actually produce your game you will need a detailed list of required animations to give to the programmers and artists working on it. This will have to include every action that your character may have to do at any point. Hence, in this section it is extremely important that you not only list the actions your character will be performing, but also describe how they should look. Remember, greatness is in the details. For example, both Mario and Sonic jump in their respective games, and when it comes down to it, both characters' jumps perform the same function, but how they each look while doing it makes such a profound difference it helps define the very character of the games. This is the place to convey this to the reader.

Music for Each Level

Creating and describing the music for your game is an important and challenging part of



Describing the rich environment of a game such as Sony's *Parappa the Rapper* or Activision's *I76*, speaks volumes to the character of the game itself



In some ways a game such as *Resident Evil* comes closer to a movie than a game, and thus a design document for something like it might require methods closely resembling a screenplay

making a thorough design document. Naturally, this section should discuss the technical aspects of the music, such as the use of event-triggered music or Redbook Audio, all of which should be as thoroughly described as the animation. However, there are also a number of things that must be decided and thus explained about the quality of the music as well. For example, will the music be used as background ambience or as an element designed to drive the game forward? The music in the original *WipeOut*, for example, was chosen specifically to elevate the energy level of the game, and went on to become a big part of the game's allure. If your game was

telephone ringing, and the gurgling of a water cooler. If, however, your game is less realistic, you may want to compare the sound effects in your game to those of a classic Warner Bros. cartoon. For example, "When the enemy characters are shot, they will shatter into many pieces and fall to the ground. An exaggerated glass shattering sound effect should be used to compliment the effect."

Items (Live Scenery) in Each Level

Earlier you described the environment for a specific stage, now it's time to describe what could be considered the "live" items in a specific level. For an item to be "live" it need be interactive in some way, and so the items described in this section are those which can be stood on, picked up, exploded, pushed, shot, pulled, examined or whatever else your character may be able to do. These are generally items that mean something to the progression of your game, and therefore need to be explained thoroughly for each level.

This is also a good opportunity to roughly explain how each of these items will be created. For example are they 3D polygonal models or sprites? This will give a potential producer an idea from the very beginning what kind of talents he or she will need to put on the project.

And Then It's Time To Start All Over Again

It's important to remember that you should be working on your game in manageable sections. Thus everything you've just detailed for level one must be reconsidered for each successive level. Obviously, a focused design document will not waste time explaining the same thing over and over again, but if your character has a new move in level eight that he didn't have in level one, it must be explained in the detail of level eight. If however, your character is doing essentially the same thing in level eight that he did in level four, you can simply reference the detailed description from level four.

One last thing to consider in creating a design document is that the overall game must have a certain amount of cohesion. It's probably not a good idea to spend months on a description of level one without ever considering how it all fits with what happens in level two. Therefore, most designers find it easier to apply levels of detail in waves, creating a broad stroke version of the document first, then piece by piece raising it to the level of detail they're trying to achieve.

It's important that you should work on your game in manageable sections

equally dependent on music for its success, you will want to take the time to thoroughly describe exactly the kind of effect it should have on players.

Sound Effects in Each Level

Just as you have to carefully consider the music in each level, the sound effects you choose say a lot about the game you're planning. If your game idea is to create a hyper-realistic adventure game, then you're probably planning to use real-world sound samples. Therefore, if the level you're planning takes place in someone's office you might want to mention there will be a sound effect for a closing door, the opening of a desk drawer, the background sound of someone typing, a



Personalizing Your Design Document

As we stated back at the beginning, unlike more mature entertainment industries, the game industry is still pretty liberal about its essential documentation. This means that your document need not follow exactly the format laid out by this story, or in any other guidelines set before you. In fact, it is highly doubtful that it will follow any example to the letter.

As a game designer, you have the opportunity and the responsibility to decide what is important about your game and then highlight that aspect in your documentation. What you will probably find is that some elements of your game idea work very well with this or other descriptions of how to create a design document, while other elements may require totally original treatments. For example, you may find the need to employ a more traditional Hollywood approach in the use of storyboarding, or the fiction writing approach and first create a very detailed outline. Botti recalls, "When I was 13 and designing a game for my Apple II, my design document consisted of a map and a notebook." In point of fact, that game idea went on to be sold and published.

Whatever the case, your main objective in creating a design document or any other documentation for your game remains the same: to give someone else, be they a potential producer, artist, programmer or whoever, a clear idea of the game that's floating around in your head. If this takes more artwork than words, do it. If it takes a slide show or a prototype computer program, get to work on them.

The point is, the only way you're going to get the help you need is through your ability to express your ideas to those who can help you get the job done. A thoughtful design document, whatever its form, can help you immensely in that quest.

Getting your document into the Right Hands

Creating a professional design document is only step one in the long and difficult process of actually getting a game produced in today's competitive market. The next step is to get your document (be it a formal design document, design treatment, or anything in between) into the right hands. To begin with you should accept the fact that your chances of actually getting your game made, statistically speaking, are not that great. For one, there are legal reasons why many companies will not even look at your game idea no matter how much work you put into creating a professional document. Most of these reasons involve what could be described as the problem of "ownership of ideas." From a company's perspective, if it looks at a design document and rejects it, then later the company comes out with a game that bears any similarity to the rejected concept (even coincidentally), the company may open itself to a lawsuit. Thus, most companies have an iron-clad policy of returning game ideas unopened or at least unexamined.

The situation is not hopeless, however. One way to get around this potential problem is to offer to sign a legal document waiving your rights to take legal action against the company in question no matter what ideas they may use in the future. Of course, this does take away your right to legal action if the company actually does steal your ideas, but it could end up being your only viable option.

Many companies do have active acquisition departments; the key is finding that key person who can get a project on the

right person's desk. This is why it is important to carefully research the companies you are sending your game ideas to. Be sure to pick a company with a good reputation and try to have some contact with someone at the company before sending them anything. (A good place to meet company employees, especially if you have no other leads, is online. We know of scores of people who made crucial first employment contacts that way.)

A much safer and more likely way to get your game made is to first get yourself employed by a software company. This could mean any number of things depending on your skills, but the truth of the matter is that having a job in the testing department of a game publisher already puts you in a much better position for having your game idea published by that company. Another important aspect of this approach is that it displays your willingness to work for the company to which you're sending your game design. Basically, what you're saying to a company when you're sending them your design is "I want to come make this game as an employee of your company." There is still no guarantee that the company you want to make your game with is going to give you the chance, but if you're willing to be flexible, you're likely to find some kind of audience for your ideas.

For further information on creating design documents and other game documentation see:

The Ultimate Game Developer's Sourcebook
by Ben Sawyer and
Inside Electronic Game Design
by Arnie Katz & Laurie Yates



HE MEDIEVAL CATHEDRAL OFTEN
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The Four Horsemen of the Apocalypse lurk in the shadows before you. And they are not alone. Eidolon, the last known Serpent Rider, lives. All of humanity has fallen to the archfiend and his Hell-spawned hordes. As the Necromancer, the Assassin, the Crusader, or the Paladin, you must put an end to this ravenous onslaught. But first, you must defeat the Dark Generals. Each of them awaits your arrival separately in one of four demon-infested worlds. You will know them when you see them. They will be Death, Pestilence, Famine and War. Will you be the teacher? Or the student?



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Bludgeon your way through four demon-infested worlds — Medieval, Egyptian, Mesoamerican and Roman. Smash stained glass windows, collapse structural beams, pulverize trees and shatter egos.

HEXEN II
THE BEGINNING OF THE END.

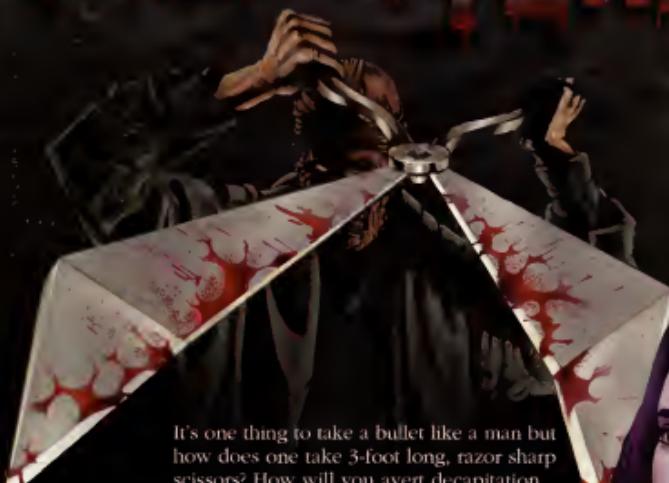




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alphas

94



86



97



82



106



56



64



78



115



90



We preview the world

Developer Shiny has been known for its unique concepts — witness Earthworm Jim and M&K. However, Messiah takes the cake in both concept and technology. It's literally unlike any game before (well, maybe Joust, but let the developers explain that). In fact, there's a number of interesting ideas floating around, from 3D Realms' Prey to Multitude's online FireTeam. Just keep reading.

56 Messiah PC CD-ROM
Shiny invents another unique concept

64 Computer Artworks You know it for its art, how about games?

74 Prey PC CD-ROM
The latest from the Duke Nukem team

74 Psybadek PlayStation
The insector team races something new

78 FireTeam Online
Team play over the Internet

82 Daikatana PC CD-ROM
John Romero's first non-id game is coming

86 Dark Vengeance PC CD-ROM
Third person fantasy adventure

70 Agents of Justice PC CD-ROM
Superheroes meet tactical combat

94 Die by the Sword PC CD-ROM
Chop off heads in a 3D environment

97 Earthworm Jim 3D Nintendo 64
The worm that turns is now in polygons

101 Everquest Online
Sony enters the online RPG market

116 Spearhead PC CD-ROM
The first 3D accelerated Abrams tank sim

113 KillWheel PlayStation
Crazy two-headed ogres run over elves

116 Monster Rancher PlayStation
Part Tamagotchi, part fighting game

116 Melbourne House Ever heard of this down-under developer?

123 Plane Crazy PC, Arcade
Race planes and, well, go crazy

See the Next Generation Disc for more information when you see this symbol

Check for unresponsive

Gently tap & ask, "Are



Figure 5-3

ness
you okay?"



If they don't respond, check immediate area for Tomb Raider 2, Deathtrap Dungeon, Fighting Force or any other Eidos games. Then make off with whichever ones you can before the poor bastard comes to.

EIDOS
INTERACTIVE
You've been warned.

Messiah



Shiny Entertainment offers both the sublime and the ridiculous in its state-of-the-art successor to *MDK*



The goal is to make a game that really ends the polygon wars once and for all," calmly states Dave Perry. And you get the feeling he means it. Having shuffled papers behind the big, black desk of Shiny Entertainment's presidential office for the last year or so, and having watched Nick Bruty and Bob Stephenson — the core of the MDK team — quit Shiny and start up their own development team, Perry is

Format:	PC
Publisher:	InterPlay
Developer:	Shiny Entertainment
Release Date:	Q1 1998
Origin:	U.S.



itching to get his hands dirty once more and to get back to the business of making games. Messiah is his chosen project and he intends it to be a blockbuster. Scheduled for completion in the spring of 1998 and destined for PC (plans for console versions are in the "maybe" stage at this time), Messiah is currently little more than a wacky concept and a thoroughly impressive technology demo. But from such small acorns mighty oaks often grow, especially when nurtured by golden boy Perry. Sure, perhaps both he and Shiny Entertainment get far too much press and are hyped to the moon, but — with Earthworm Jim and MDK — the sales figures and review scores seem to indicate that, so far at least, he has delivered on all that he has promised. So what does he have planned for the gaming public this time?



These levels don't have much gameplay — yet — but they serve as a proof of technology, to demonstrate the lighting effects, characters, and what could be awesome. Inspiring level designs

"We're quite happy to admit that we've stolen the mechanic of Messiah from another game, and that game is Joust," confides Perry. He goes on to explain, "Your character will be able to fly, but not too well. So, like in Joust, you can only fly for a very short period of time. If

Perry is itching to get his hands dirty once more

you press jump and hold it he will glide, but if you keep tapping it he will fly a little — there will be a real feeling of weight." But, beyond this tactile gameplay element, any similarities between John Newcomer's 1982 arcade classic and Shiny's Messiah are thin. Instead of a solitary, 2D platform-based arena,



Characters are unbelievably detailed; models start at 500,000 polygons and scale down from there. Expect the game to have hefty RAM needs

Messiah offers a lush 3D world. Instead of jousting with opponents, Messiah invites players to possess the bodies of vanquished foes and lay waste with an arsenal of hi-tech (and medieval) weaponry. And instead of players taking the role of a knight riding atop an ostrich, Messiah's chief protagonist is a cherub — a chubby, wedding angel.

So what's the game about? "The lead character, the kid, has the ability to possess other characters, so you're going to be able to play 20 different people in the game," Perry explains. "You can literally climb inside their body, take over that character, play as

that character and pick up new weapons. You start off with no real weapons, but you're fast and you can fly — just."

"The gameplay is based around puzzles in an action environment," offers Michael Saks Persson, Messiah's lead programmer, explaining how the "possession" of enemies affects the play experience, "so you have to be very clever about which characters you choose to take over at different times." It sounds most bizarre. Certainly, the sight of a diaper-clad angel running around a hostile 3D world killing things is most disturbing. Perry agrees. "Sure, it's not by any means a 'nice' game," he concedes. "But it's not designed for young kids. It's an adult game, and an adult game is good for Shiny's portfolio of titles. We did

"We've kind of solved the polygon problem once and for all"

Sure Perry President, Shiny Entertainment

Sketches



These design sketches give a feel for the types of characters players will see

Earthworm Jim which was a kids' game, *MDK* which is dark but kinda funny — it straddled the gap — but Messiah is definitely more dark, and it will compliment the other games that we've done in the past," isn't Perry worried that "dark" has been done to death over the last couple of years? He smiles. "We're going to do 'dark' slightly differently."

As for the background story, Perry is reluctant to give too much away. "[In the game] it's foreordained that the savior will arrive to save the world in 2000 years, but it turns out that this kid has arrived two years early," is pretty much all he will reveal at this point. Since the story isn't finalized yet (expect a much more elaborate story featuring the Seven Seals and the Apocalypse and the cherub — tentatively named "Bob" — needing to



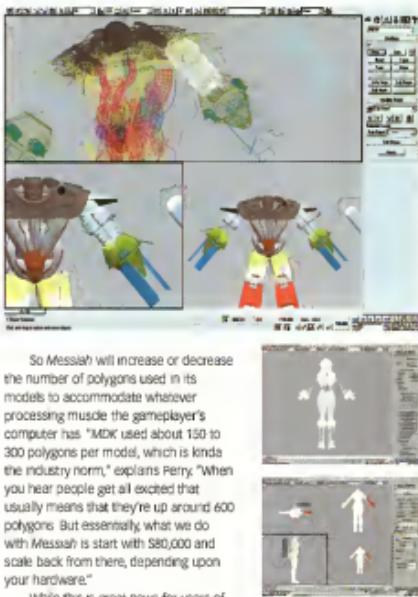
thwart a plot by the Devil to unleash Armageddon early to gain an advantage over the forces of God. Perry's much happier talking about the technology behind Messiah and how he believes, it stands head and shoulders above what Shiny's competitors are doing.

"We've kind of solved the polygon problem once and for all," he brags. "People can bitch and fight about how many polygons per second they're pushing, but at the minute we're pushing around 500 to 1000 times more than Tomb Raider — in software. So the argument is over. My opinion is that we are two years ahead of everyone else. With the exception of 3Dfx, Messiah software even runs faster than most 3D hardware." That's a bold statement, so what's the trick?

"The thing that makes the difference is that we've designed Messiah so it's truly scalable. At the CGDC [Computer Game Developers Conference] scalability was the big deal. Everyone was saying that it is clearly the next step because there's such a spread of processors out there — you've got one guy running on his 486 while there are other guys with Pentium 266s. Not many games can run well on both. But Messiah can work out the speed of your machine and then take out or add polygons accordingly, in real time. In this way, the frame rate will stay constant throughout."



The game supports 3Dfx and D3D, but these screens are unenhanced



So Messiah will increase or decrease the number of polygons used in its models to accommodate whatever processing muscle the gameplayer's computer has. MKD used about 150 to 300 polygons per model, which is kinda the industry norm," explains Perry. "When you hear people get all excited that usually means that they're up around 600 polygons. But essentially, what we do with Messiah is start with 580,000 and scale back from there, depending upon your hardware."

While this is great news for users of low-end (and high-end) machines, it doesn't explain why Messiah's models look so complex or vindicate Perry's claim to be two years ahead of the competition in terms of polygons per second. The magic, evidently, is in how Shiny scales Messiah's models up and down. "What most people don't realize is that polygons are only visible when a game character is standing still," Perry reveals. "If a character is moving quickly, then it tends to camouflage its specific make-up. And this trick of the eye is the key to what we are doing — Messiah's technology is a whole different way of thinking."

Although reluctant to show his hand completely ("We're in the patent process at the moment, so I can't talk too much about it," he explains), Perry is willing to add a little more. "Every developer who went to the CGDC knows that tessellation, the breakdown of polygons — this scalability that I was talking about earlier — is the goal. And everyone will have rushed off and started work on this. But we've gone one step further, we've taken a step that wasn't even discussed at the CGDC, and this is real-time

Once the characters are created in 3D Studio MAX, they are brought into a proprietary tool where muscle stresses are added to the skeletons with a "spray paint" like tool, this enables the incredibly smooth character animation



deformation, the building up of polygons." And how does this apply to what Messiah's technology is doing? "We don't actually store models as polygons, and this makes the difference. If you store things broken down as polygons and then you rebuild them back up as polygons, it takes time. We store them as a shape and then create polygons at the last minute."

All at Shiny seem confident this kind of shape-based engine is the way forward. Person is quite vociferous on the subject. "All of the alternative



The characters move and band with stunning smoothness — for a QuickTime movie demonstration, check out this month's NG Disc

"All of the alternative engines I've heard proposed are based on either stupidity or laziness"

Michael Sean Person Lead Programmer, Shiny Entertainment

engines that I've heard proposed are based on either stupidity or laziness," he declares. "What they do is model a character based on 1000 polygons — so they're restricted right away — and then they pre-calculate what polygons to lose according to how close the model's going to be on screen. So pretty much, they pre-store five models at five different dependencies —

and have only five steps of closeness." Shiny's alternative is, Person claims, considerably more efficient. "Messiah's initial models are made up of 580,000 polygons, which I convert into shapes — not just triangles — and these shapes are then tessellated and deformed real-time in the engine. By changing our models up into shapes and then back down into polygons in real-time, there is no overhead. So if, at a point in the game, I choose to generate my character with just 30 polygons, I don't have to look through the 8000 other polygons that I just missed. And this is its real strength."

The result is a practically limitless number of "steps of closeness" for Messiah's models, and — because the processor isn't spending time sorting through lots of which polygons to draw and which to leave out — a lot of extra processor time that can be devoted to making the models on screen look as detailed as possible. Because this is a fundamental technique and, in Perry's words, "a whole new way of skinning this cat," it can work on any system, be it console, standard PC, or a PC equipped with the latest 3D accelerator card.

One of the ways in which Shiny is putting this freed-up processing power to



Most polygonal models have tearing problems in curved, jointed areas, like the buttocks (that's why so many female fighting game characters wear skirts). That's not the case in Messiah, and the characters are designed to show that off



This level has no floor to speak of — players will need to find ledges for Bob to rest on

good use is in blurring the transitions between the models' different sequences of animation. "This is real-time interpolation, and it's another thing you hear a lot about," says Perry. "But whereas a lot of people are talking the talk, we can demonstrate that we've actually got it working — you can lead from one movement to another. So, for example, you can move from a walk to a run without any kind of jerk. I've never actually seen this done before."

In-game lighting effects also get a new technological

boost. "We also have volumetric lighting which flood-fills areas," Perry explains. "so if you put your head into a lit area, just your head will be lit up." Indeed, some of the earliest levels already have this feature implemented, and the results, while subtle, are amazing.

But perhaps the most impressive feature of Messiah's in-game characters is the smoothness of their skin and the integrity of their physical make-up as they move. Using skeletal frames

on which to apply flesh and skin, the Messiah team has been able to achieve an unprecedented degree of realism, and having mastered the technique, the team is not about to hide its light under a bushel. "Sure, we have a lot of fleshy-looking characters — because we can," laughs Persson. "We simply put flesh on our skeletal models, and there is little or no disruption in the skin." Once again, because this is implementing a new core technology — as opposed to the intricate fine-tuning of established methods — the creation of new characters and models in a short period of time is reasonably straightforward.

"It's a fairly trivial task to implement a character," explains Persson, "and we can do it in a few hours. My system takes



Most of the levels feature lots of perches from which a cherub could easily swoop down and possess a bedevil



Levels are huge (top). Puzzles figure heavily in gameplay (above).

a character and renders it, 3D Studio generates all the maps for it; I select the body parts, apply my skeleton once and then keep applying motions. Everything works from 3D Studio, so you just load in a project file that contains a hierarchy of motion, convert it, and it will work in the game." Messiah also handles 360° of texture mapping, so models look detailed when viewed from any angle, with not just the "front" and "back" sandwich of textures commonly used as a shortcut. "We can also add traditional polygons to

The team has achieved an unprecedented degree of realism

these models, if they are suited to the job," adds Perry. "Although the cherub is made up of shapes and then texture-mapped, his wings, for example, are easily made up of just a few texture-mapped polygons."

Additionally, all of the characters have been motion captured to provide the best balance between realism and versatility. For the central character the team motion-captured a Little Person, whose past credits include playing Donald Duck at Disneyland. Why not simply sample a child's movements for Messiah's lead role? "Because essentially it's a baby," Perry explains. "It's a cherub — it wears a diaper — and it moves in the way babies do. And, unfortunately, we couldn't really motion capture a baby."

In fitting with this angelic theme,

bows and arrows take their inevitable place in the arsenal of weaponry. But even here, Shiny is keen to point out they have their own twist. "You're going to have weapons that stick into people," explains Perry, with grim relish. "Bows and arrows, or harpoons, will actually stick into the body of your enemy and he or she will continue to run around, weakened, like a bull facing a Matador."

Perry is obviously excited about Messiah's prospects, even at this early stage, and in typical fashion he makes no bones about it. "What I really love is seeing things that no one's quite seen before," he reveals, "so what we're here today to show is that the Messiah technology exists and that we're now making a game from it."

Certainly, all the early signs are promising, and the team seems as committed to its success as it could be. "We've put together a whole new team of guys," Perry explains, "and they are so dedicated to putting this together that they are working non-stop already. They are so passionate, they did the whole game engine in around two months."

Perry himself, however, is waiting until the last minute to add his main contribution to the project. "Once the guys say 'the code's ready' my job is to tweak all the values on the run, jump, and other action fields until the feels is perfect," he explains. Judging by his track record, and the suitably impressive technology demonstrations we've seen so far, we have no reason to assume that he'll fail.



Camera angles will be tweaked for playability until the game ships



Motion capture isn't new, but Shiny's method of replaying motions onscreen (with no clipping issues) may be novel enough for a patent

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Computer Artworks

William Latham's organic algorithms have heretofore mainly found popular acclaim in screensavers. Now he's altered his focus, and the future of gameplay may be changed forever



In the game, the player controls four Geno Hunters— weird hybrids of insect, reptile, and machine—on various missions of destruction

The screensaver has never been a particularly respected art form in the world of computer entertainment – not least because modern monitors have now rendered it pointless. However, last year burgeoning software company Computer Artworks turned its acclaimed Organic Art package into a saver and then made the program available on Microsoft's website. Within ten days, 100,000 downloads had been made and it suddenly seemed as though no PC was complete without a 3D virtual sculpture swirling around the screen when the computer was not in use.

The reason for the fuss was simple: Organic Art was a beautiful and inspiring exploration of computer artist William Latham's theories on evolutionary art and artificial life – now the driving forces behind everything Computer Artworks does. But this was just the tip of the company's ambitions. Latham, together with game designer and programmer Mark

Atkinson and a very small team of committed individuals, is now working on a number of projects, including Organic Art 2, a logo for new cinematic sound system DTS, and, most interestingly, a PC game called Evolve.

It is the latter which the company seems to be most excited about. Latham himself has admitted that "Organic Art was only a stepping stone towards making Evolve." It is also that game, still in the early stages of development, which drew most of **Next Generation's** attention on a recent trip to Computer Artworks' cramped offices in Victoria, London.

The game itself sounds straightforward. An alien race is spreading throughout the galaxy like a virus, landing



When weapons are not in use, they merge back into the Geno Hunter's exoskeleton

on planets, using up their resources and then destroying them, sending millions of alien eggs into space ready to land on new worlds. The player controls a group of four biomechanical droids, known as Geno Hunters, which land on one such infected planet and have to carry out 12 to 15 missions (the final number hasn't yet been decided) to destroy the alien race and save the planet.

At a very basic level, then, Evolve is a kind of third person strategy shoot 'em up, combining elements of Quake (violence), Command & Conquer (military strategy) and Tomb Raider (puzzle solving). However, beneath this rather orthodox exterior, almost every facet of the game is driven by Latham's organic/evolutionary ideas – not for the sake of it, insists Atkinson, but because they add to the gameplay.

Perhaps the most important use of the evolution concept is in the Geno Hunters' capacity for mutation. This process is probably best described by Atkinson, who refined Latham's original ideas into a viable game system. "The main form of power-up is the Mutator," he explains. "By killing things you accumulate mutation points, and once you reach the threshold you get to use the Mutator

[which appears as a separate options screen]. This gives you a selection of mutant variants on your Geno Hunter, each powering up the creature in a different way – faster, stronger, smarter, extra weapon, bigger weapon, modified body part, extra body part, etc, or, if you're lucky, a new ability. You choose the variant you like best and your GH morphs into this form."

In other words, instead of picking up rigidly defined power-ups, the player acquires genetic traits which give his Hunter different abilities and cause it to morph into new shapes. In addition, the player can use the Mutator screen to merge the genetic attributes of two Geno Hunters (ie to make them) in order to come up with "babies" which combine the separate strengths of their "parents". In this way users can mold Hunters to comply with their own ideas of what will make a successful being – fast and athletic, or slow and loaded down with weapons. The chance of two players mutating their Geno Hunters into identical beings is apparently 1,000,000,000 to one, so each group will be unique. Computer Artworks is even considering making it possible for players to swap Hunters over the Net.

And that's not all According to Atkinson, players can also gain new special abilities (fire-breathing, polymorph, psychic, body charge, web, and so on) by killing a boss alien which possesses the ability the player seeks. Once dead, the boss drops the gene and the Hunter picking it up immediately acquires that new ability. It then becomes part of the player's collective gene pool, which means that it will have an increased chance of appearing in all Geno Hunter Mutator sessions from then on.

Given this diversity, it is difficult to describe what the Geno Hunters actually look like, although they're probably most accurately described as "biomechanical



The variety of creatures (top) and environments (above) in the game, each a realization of Latham's organic art techniques, is immense



Textures are so detailed in *Evolv*, and the frame rate so smooth, that the game often resembles rendered footage.



Insects' Next Generation saw a number of mutated OHs at Computer Artworks, all of which looked amazingly intricate and smoothly animated. Like the Hunters, the baddies can also mutate themselves, but they come in basic types such as soldiers, scouts, builders, etc. It will be up to the player to find out what enemy beings fagan, "biomechanical insect" is the most appropriate description do what, and which pose the biggest threat. All, however, are highly intelligent. As Latham points out, "The aliens that will be up against are really "living", driven by AI and A-life algorithms. They are seriously dangerous opponents, as they are unpredictable like predators in the real world." This should add an extra challenge to players used to predictable enemy behavior. .

control one Hunter while at the same time keeping an eye on what the others are up to. This not only allows all four to be protected simultaneously but makes it relatively easy to formulate deployment strategies.

Visually, the game is truly breathtaking. Each mission takes advantage of a different landscape style, so the player gets to see jungles, ice plains, deserts, etc – all lavishly detailed and breathily colored in hi-res. The game will also be supporting 3D acceleration cards, so a sustained frame rate of 30 fps is expected.

Most interestingly, though all of the weird landscape features are designed with Latheron's Organic Art at their core, which means nothing is quite as rigid as it seems and many aspects of the surroundings are open to mutation. Explorable tunnels, for example, open up out of nowhere, and seemingly harmless plants transmute into deadly enemies as the player passes. It is as if every aspect of the game is alive – a refreshing move away from the static prettiness offered by most game scenery.

Computer Artworks is, if not unique, certainly one of the most innovative companies working in software development today. Despite the familiar gameplay themes, there's a wealth of ideas here, and, for a change, a slightly different range of influences than the last big beat-'em up or first-person shoot-'em up. If *Evoive* is a success, there is a chance it could convince publishers to allow a greater element of individuality into games. Latham, however, remains philosophical about his chances. "This could either be an enormous success or a gigantic failure," he says. "It's a matter of fate."



The art team has spent hundreds of hours mapping out the *Cave* numbered mutations.

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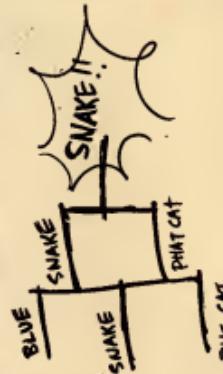
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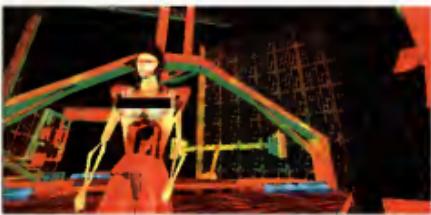


Prey



These early creature designs may or may not be in the final game, but they show much of the same imagination we'd expect from 3D Realms

The designers of *Duke Nukem 3D* break the laws of physics with their latest engine, and push the first-person game onto new ground



Format:	PC CD-ROM
Publisher:	GT Interactive
Developer:	3D Realms
Release Date:	June 1998
Origin:	U.S.

Not content with designing one of the finest first-person action games ever, the *Duke Nukem* 3D designers at 3D Realms are preparing to set the gaming world on its collective ear again with a new first-person, 3D

The Portal engine takes a new approach to spatial relationships

action game, *Prey*. Although currently set for a mid-1998 release, when asked when the title will be completed, project leader Paul Shuytema prefers to echo Charlton Heston's Michelangelo in "The Agony and the Ecstasy": "When it's finished."

Prey uses a new 3D engine, called Portal, which takes a new approach to spatial relationships. As Shuytema explains, "With the Quake- and Unreal-type engines, in order to speed up the way the processor computes geometry, they pre-compute the possible visibilities



3D Realms' *Prey* level editor, dubbed "Preditor," will also be available

in a level. Now that's a very efficient way to enhance speed, but the problem is you're stuck with non-dynamic geometry. We thought there had to be a better way."

That "better way" is based on a concept called Portals instead of modeling a structure as a series of solid walls which form rooms and corridors, the Portal engine breaks up each area into a discrete, arbitrary room, then links the rooms through portals, which can be doors, windows, or other openings. Imagine that each room is a Web page, with each link being a door to another room. Like a Web page, each link can lead anywhere, not just to the next page. Shuytema continues, "The one thing that's cool with our approach is that it allows us to say 'to hell with Euclidean geometry.' I mean, now we can play with



3D Realms' new Portal engine enables the designers to free themselves from Euclidean geometry, arranging rooms in totally arbitrary ways

things there's no possible way you could do in real life — unless you had enormous amounts of drugs, and then you probably couldn't remember it afterwards!"

The result is oddly reminiscent of a 3D version of one of gaming's early text adventures, in which moving north to the next room, then turning around and exiting to the south, did not necessarily put the player back in the same room. One demo shown to *Next Generation* let the player enter a room, turn left and exit the room, but then wind up back where he started. One could actually peek through the exit of the second room and see oneself. Disconcerting to say the least, but the possible repercussions for gameplay are obvious.

Yet the team has taken the idea one step further. "We didn't invent Portal technology," Shuytema explains, "but the one or two other titles I know of that are trying to use it have the limitation that a portal must exist on the edge of a room — on a wall or a floor. Our engine programmer, William Scarborough, has come up with a way so that portals can be arbitrarily placed. They can be free-floating if you want, and also you can dynamically create portals, so we can



link room geometries on the fly. This has some pretty spectacular gameplay implications — plus it looks cool as hell."

The player's character is one Talon Brave, a Native American who is taken aboard Trocara, a huge, ring-like, artificial world larger than the Earth. "We've been doing a lot of research on Plains Indian rituals, religion, and philosophy that are going to be central to what goes on in the game," Shuytema insists. Trocara is inhabited by three distinct species (plus a fourth, known as the Keepers, who are being kept under



Prey will require a 3D accelerator, creating a fine sense of space

tight wraps). The aliens' world thus affords a great deal of variety within each species' area, plus outdoor areas in between. Talon will also be able to commandeer a shuttle to fly from area to area through space.

Prey is one of the first games **Next Generation** has learned of that will require a 3D accelerator card (others include *UltraX IX*, *Redline*, *Out of the Void*, and Microsoft's *Baseball*). This enables the designers to work with 16-bit textures and lighting, and also takes some of the "grunt work" of rendering off the CPU and frees it for other uses. The AI is modeled on finite state system AI, "which isn't exactly rocket science," Shuytema admits. Still, he continues, "In *Doom*, for example, you have two only states, Idle and Attack. But by using an accelerator and freeing the CPU, we can play around with a lot of variations of states, like Hunt, Hide, and Snipe, and also play around with the different triggers caused by both the player and the environment."

Many first-person design houses, 3D Realms and id among them, have seen a fair amount of upheaval over the last year, with many programmers and artists

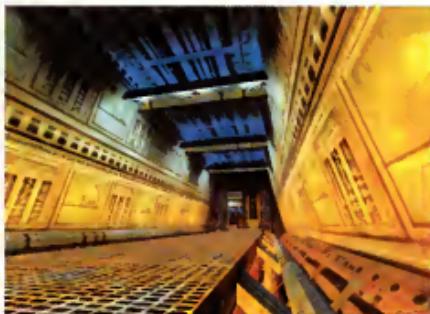


Prey also makes use of a new lighting engine, which filters and blends colored light in dramatic ways

switching companies, or leaving and joining to form new ones. The resulting competition in the genre is daunting, but Shuytema thinks differently. "Actually, it's kind of invigorating. Because there is so much competition we can't just sit on our butts and produce formulaic stuff. We're all fighting basically for the same market share, and in order to get that we have to deliver an insanely superior product, and I think that just serves the players — they're going to get tons of great games. And for us as gameplayers, we're excited too. I can't wait to play *Unreal*. *Quake II* looks gorgeous. I want to see where *Duke Nukem* is going — I mean, those are going to be fun, fun games." He concludes, "I think this genre is in an evolutionary state, and people are really experimenting now with new and different ways to deliver the play experience. I think it's exciting."



While these screens may give the impression of another dungeon crawl, *Prey* will have outside areas





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MACE The Dark Age

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 MIDWAY





Psybadék



Psybadék combines the tricks-oriented style of skateboarding with platform gaming elements



From the team that redefined racing games for the 32-bit era comes a new kind of platform game. Can *Psybadék* make a similar impact this late in the game?

The original *WipeOut* is nearly entirely responsible for the rebirth of Psygnosis in the 32-bit age, and the team behind that remarkable game is now set to show us something new. "If you wanted to nail it to a genre, *Psybadék* is a platform/adventure game," suggests

Format:	PlayStation
Publisher:	Psygnosis
Developer:	Psygnosis
Release Date:	First Quarter 1998
Origin:	Europe

The game differs from *WipeOut* in its wide-open environment



Similar to a more traditional platform game, each level ends with a challenging boss character

Morgan O'Rahilly, executive producer on the project, it's important to note, however, that no one on the *Psybadék* team is anxious for the new project to fit neatly into an established genre, and upon seeing the game it's clear that this will not be a problem. At first glance the game bears no particular resemblance to the *WipeOut* series, but it does showcase a few of the elements that made the team's other series so great, including a fluid sense of movement and an obvious attention to style. Probably the most obvious connection is the use of hovercrafts. In

Psybadék the characters ride around on skateboard-like platforms, but without the limitations created by direct contact with the ground. "It probably comes from some horrible childhood obsession with being stuck to the floor," admits Nick Burcombe, lead designer on the project.

Where the game differs from *WipeOut*, however, is in its wide-open environment, in which the player can move about freely. An important part of the original design, in fact, was to enable the player to simply have fun in the environment without any particular sense of urgency about getting to the next level. "The most rewarding games to play are the ones which take a while to get the hang of the controls," suggests Burcombe, and *Psybadék* is intended to have this quality. It's in learning to control the hoverdeck that the player will eventually find his way through the platform-style levels while battling enemies and collecting power-ups. It's also through mastering the controls that the player will learn a host of new skateboard-style tricks which can be



Though not a racing game, Psybadak will feature the fast, fluid motion often associated with the genre

used for fun or to achieve certain goals in the game.

Music has played an essential role in Psybadak's recent history, especially when considering the outstanding soundtracks of WipeOut and WipeOut XL. In Psybadak, the team has taken this aspect into the next level by creating an interactive mode by which the player maintains some control over the music while playing. Depending on the situation a player gets involved in, the music will seamlessly change to reflect the action of the game. According to O'Rahilly, "We set new precedents with WipeOut. Here we're going another step so that when you're playing the game you're constantly in the mix."



The game features a cast of characters all created with a hip, 'youth of today' look and attitude

Another aspect that sets Psybadak apart from the 32-bit era in general is the look of the game. "The graphical style is

"The graphical style is absolutely perfect for the game"

Nick Burcombe, lead designer

absolutely perfect for the game," says Burcombe. Scaled down in detail and possibly even sophistication from WipeOut, Psybadak maintains a clean and bold look throughout. And it's against this unobtrusive backdrop that the characters' stylish designs are made to stand out and announce their hip and contemporary attitudes. In doing so, the game grants itself a certain amount of distinction from other platform/adventure games such as Mario and Crash, wherein the characters seem somehow removed from the real world. "We wanted to go for a Manga-style cute and cool character," suggests O'Rahilly. Psybadak also features a larger group of characters than most games within the genre, and in doing so the game takes on almost an RPG feel. According to Burcombe, "I love the Mario's and Yoshi's and the other mascot games, but I wanted to create a bit more empathy with a cast of characters."

"When I first set out to do WipeOut it was a blend of games that I was playing at the time," says Burcombe. And so what does Psybadak say about the games Nick has been playing lately? It's hard to say for sure, but it's possible that he's been seeing things in them that the rest of us have been missing.



The enemy characters maintain the overall cutesy look



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FireTeam

These days, online game projects are cropping up at a frightening rate, even though exactly what the "online" experience is, or should be, hasn't yet become clear. Some, however, have more interesting ideas than others; one of the companies at the forefront of these pioneers, feeling its way through the still untested World Wide Web, is Multitude. Co-founded a scant year ago by

The designers have boasted about "just in time" content

Ned Lerner (Chuck Yeager's Advanced Flight Trainer, Ultima Underworld) and Art Min (System Shock, Terra Nova), Multitude should have its online answer, FireTeam, up and running by the holidays.

FireTeam is a multiplayer, 2D, isometric action game, and as the title implies, the emphasis is on squad-level combat and team dynamics. The engine is a deliberate attempt to adapt the overall dynamics of Microprose's X-COM, perhaps the finest squad-level combat system ever created, for a real-time environment. "Why did we go 2D?" Min asks, then answers his own question, "Well, for one thing, it's a lot faster. I don't think anybody can go online at 800x600, 16-bit color, and go this fast. Also, I think people want to see humans. With polygons right now, you couldn't get so of those little guys running around the screen. So we decided to go with quality of appearance. We want people to go, 'Wow! That's the best-looking online game I've ever seen!'"

At the same time, the designers at Multitude have made it their mission to keep gameplay simple, yet open-ended and adaptable, with individual engagements lasting just long enough to be involving, without leaving players feeling as if they've seen it all. Perhaps the most interesting aspect of FireTeam, however (other than the impressively low latency), is the addition of Multitude's patented voice technology, which allows squad members to communicate with each other in real time over the Net without requiring a voice modem — voice-

While online gaming still has many issues that need addressing, one company seems to have nailed an awful lot of them at once



The only trouble with this picture is that it can't show the players talking to each other in real time using Multitude's voice technology



The level editor allows new combat areas to be created in days

Format:	Online
Publisher:	Multitude
Developer:	Multitude
Release Date:	Winter 1997
Origin:	U.S.

activated and "hands free." The ability to shout orders and information at each other may seem like a small thing, but it adds tremendously to the immersiveness of the experience, and drives home the point that these are real people the player is interacting with. When FireTeam becomes available at retail later this year, Multitude plans to bundle the disc with an earphone and mike headset.

This sense of teamwork is the focus of not only the game itself, but Multitude's overall approach to the FireTeam site. "We looked at Heat's little spec about their lobby, and community, and having individual Web pages, and we were like, 'Hey! Did they read our design document?'" Min jokes. "We believe the whole experience is very important. Say you've gone home, you think, 'Well, let me log on and see if any of my friends are around.' You might not even play a game,



but you'll hang out, chat, check mail, it's really about more than just a ten or twenty minute game, and we want to facilitate that as much as possible."

Min continues, "Most importantly, we'll have persistent teams. Sure, you can jump on anytime and join a squad, but where's the bond? So we're going to have — well, we don't want to call them guilds, because that sounds too much like fantasy-based stuff, but each persistent squad will have custom web pages we're going to sponsor, and there will be privileges for joining one. We want to encourage people to join together, because that's the cool part of being on the system, that sense of community, knowing that when you log on you've got four or five friends you can depend on."

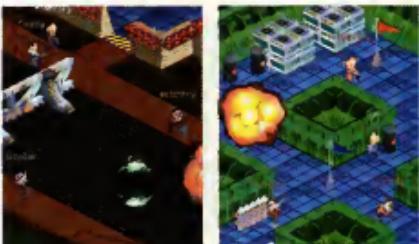
And unlike a number of persistent online entities, the Rim Team engine is open-ended enough to be adaptable to new scenarios at any time. The designers have boasted about their "just-in-time" content, and it's not idle talk; their level editor, which will be available to the public,



"Just in time content" means new scenarios will be constantly available. Note the *Lost World*-inspired theme (above left), with players as raptors.

allows the creation of new engagement areas in two weeks or less. "Think about the Peruvian hostage situation, or the L.A. bank robbery," Min elaborates. "We can put the L.A. bank robbery scenario up for two months, then take it down. There's always new content. One of the things I see happening is having themes. The current theme we're working on is 'Hollywood Action,' but think about having a superhero theme, or a gothic theme, or a fantasy theme. And you can choose what you want. You know, 'Today I want fantasy' so you go to the game with swords and dragons."

With its commitment to fast-paced gameplay, constantly fresh content, and building a true online community, Multitude could very well have hit on the right formula for worldwide, multiplayer gaming. Min concludes, "We're expecting small games, but a big community."



For basic squad combat, players can choose from several different kinds of troops, from heavily armed chain gunners to light scouts.

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ng alphas



Daikatana



While the game makes few leaps technologically, the environments are quite vibrant and varied

Can one of the minds behind *Doom* and *Quake* take the first-person shooter genre forward with story alone?



When John Romero (interviewed in NG 30) left id last year and founded Ion Storm with Tom Hall and Todd Porter, few expected the company to offer such a wide range of projects. There is a real-time strategy title in the works (Porter's *Doppelganger*), a 3D RPG (Hall's *Anachronox*), and perhaps most impressive (and least surprising), Romero's first-person shoot-em-up/RPG, *Daikatana*.

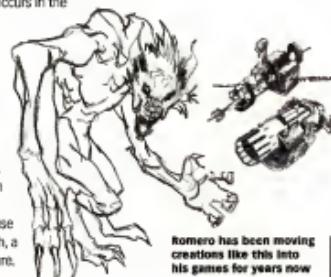
The game brings story and plot to a brain-dead genre

Daikatana is an ambitious project, not from a technology point of view (it uses the *Quake* engine), but because Romero is attempting to take the genre forward not by using technology, as he did with the leap from *Wolfenstein* to *Doom* and then to *Quake*, but by, for the first time ever, inserting a serious amount of story and plot into what has previously been a relatively brain-dead genre.

The story is naturally more developed than that of any other game in the genre. Players control a Japanese

Format:	PC CD-ROM
Publisher:	Eidos
Developer:	Ion Storm
Release Date:	November 1997
Origin:	U.S.

history expert, Hiro Miyamoto, who must travel through the four time periods with two companions, Superfly Johnson and Mikiko Ibihera. Their mission is to track down an evil scientist who has stolen not only a time travel-enabling sword, but also the cure for AIDS. Some plot advancement occurs in the expected FMV cut-scenes, but the bulk of the story develops through conversation with the other two characters. Communication between party members will use dignified speech, a first for the genre.



Romero has been moving creations like this into his games for years now



Involving locales like these were never incorporated into Quake, which is one of the reasons why Romero left and formed his own company



Breaking the game into distinct time periods is by no means a new idea for the genre (it was first done in *Ultima Underworld II*, and most recently in *Hexen II*), but never before has it been injected with so much life.

The game begins in A.D. 2455, the main character's time, and continues back through 2030 B.C. At that point, the player uses the sword to travel forward in time to A.D. 2030, but only makes it to A.D. 560.



The game still retains id style surprises around every corner

The game concludes in A.D. 2030. The environments represented in these periods are very convincing and realistic; snow gently falls in the dark ages, while

Everything about Romero's latest project improves upon his last

the swamp in 2455 bubbles noisily.

Although the game's emphasis is on story, not technology, everything about the project, from the multiple color palettes to the increased polygon count on the enemies, improves on Quake. All objects animate at twice the frame rate of Quake, and there are over 30 original music tracks in the game, each appropriate to the time period. The biggest step forward, though, is the addition of RPG-like attributes, which increase during play and affect movement, damage, and so on.

Doom and Quake are tough acts to follow, and Romero has a lot to live up to. Does the future of first-person shooters lie in the direction he is taking *Dakarana*? Can he succeed without the support of John Carmack's latest engine? The proof will be in the playing.



Different levels contain different weapons and different weather

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Dark Vengeance

Whether or not you think the name is kitschy, Reality Bytes is a developer to be taken seriously. The company's first real 3D effort, Havoc, a 3D shooter for the PC and Mac, was released in late 1995. Rated four stars, it featured unprecedented multiplayer action for its time. Now two years later, the Boston-based developer opens the doors to its dungeon for a look at its second title, Dark Vengeance.

Set in a fantasy realm, players explore

Players aren't limited to one role, they select one of five characters

the indoor and outdoor environs of Dark Vengeance from a third-person perspective. Unlike the more exploratory nature of Tomb Raider, Dark Vengeance is more combat focused, with melee elements divided between hand-to-hand combat, range weaponry and magic attacks.

But as game designer Ken Levine describes, the player is not limited to a one character role; rather, they can select from five. "You're not just choosing a cosmetic difference, you're choosing the way you're going to play the game," Levine says. "For instance, we have this gladiator; and if you choose him, he's the guy who can use all the weapons in the game."

On the opposite end of the spectrum is the warlock, who can use all the spells. The other three characters offer more middle-of-the-road gameplay; yet the chud, the savage, and the trickster each have some

Look out Deathtrap Dungeon, Reality Bytes emerges from two years of development with an impressive fantasy combat adventure

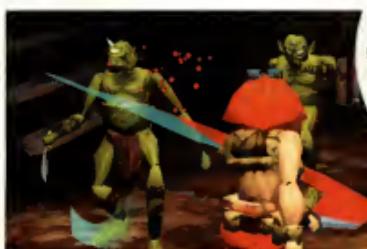


This fully 3D, third-person game features fantastically lit dungeons and beautifully designed polygonal characters to match

Format:	PC, Macintosh
Publisher:	TBA
Developer:	Reality Bytes
Release Date:	First Quarter 1998
Origin:	U.S.

unique aspects unto themselves. And all the characters have their own unique origin mission.

"It introduces the player to why they're on the larger quests of the game," says Levine. Part of the Reality Bytes



Two female characters grace the game, the dagger-wielding druid, (right) and the trickster, carrying a short-sword (left)



Enemies such as these dark elves (above) will bleed when hit. Of course, there's always the undead (left) to contend with as well.



philosophy is that the story is an integral part of the game, and therefore, should be an integrated experience. "Another reason we wanted to make the origin mission and characters different," Levine expresses, "is because we want the player, upon completing the game, to have an immediate motivation to play it again as a different character."

Dark Vengeance offers 20 levels (plus each character's origin level), more than 100 spells, over 50 enemies, and approximately 50 weapons. But the team insists that the player does not build their character across a spreadsheet. Levine mentions that the game will have a strong multiplayer component as well, supporting up to 32 players on a LAN and between 10 and 16 on the internet. "We are building a combat-oriented game," Levine says, "so it's not like players will move slowly down the dungeon in a group. We'll have them going out looking for ass to kick."

Realty Bytes has been thinking ahead for this game, with 3D acceleration and MMX support in the works (the company won't recommend anything lower than a P120 when the game ships). The company also remains dedicated to Macintosh development. "Our entire 3D game system has been maintained simultaneously on Mac and PC," declares Jon Chat,

president and CEO. "We're also looking at how we can move it to new platforms in the future."

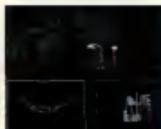
Chat also explains that Dark Vengeance will feature voice-over, and 3D sound support, a technology he maintains the company has had for three years. "It's really a matter now of making sure we use it best for the player," he says, "a fireball whizzing by and you hear it kind of Doppler off behind you. Or instead of making a pre-composed sword swipe sound, you actually hear it shift in sound from right to left if that's what's happening in terms of the motion."

But it's Jason Davis, VP of R&D, who really nails the essence of their development ideal. "It's not just the 3D rendering, it's the entire 3D action system," Davis expounds, "we view our engine as a way to fully immerse you in the world."

The company is in final negotiations for a publishing deal, and plan to make a demo available before Christmas. While *Die By the Sword* (see page 94) looks to be stiff competition, Dark Vengeance is shaping up into what could be the must-have PC fantasy game of 1998.



Concept sketches show off the werlock (top) and the savage



The development system works with both Mac and PC (above)



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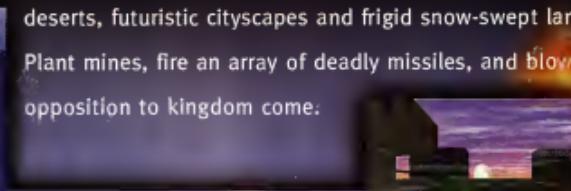


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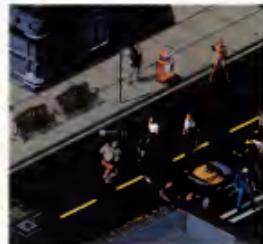
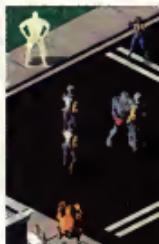
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Agents of Justice



Beat up some bad guys, stop a few crimes, cause some minor structural damage — ah, the work of a superhero is never done

Superhero games have never fared well on the PC, but Microprose hopes to buck the trend with its latest turn-based strategy game



With the exception of fighting games based on specific licensed characters — a process which has tended to yield marginal results — there's a surprising lack of games based in a comic book superhero universe. A PC RPG, in development for several years and based

Format:	PC CD-ROM
Publisher:	Microprose
Developer:	Microprose
Release Date:	Winter 1997
Origin:	U.S.

generated randomly and ranging from stopping a bank robbery to hitting an enemy convoy or taking out an enemy base. The player gains money, fame, and information depending on his or her success during the missions, which can then be used to both develop each hero's powers and add to the player's base

Unlike X-COM, however, the player is not facing a single enemy, but three world-threatening organizations: the Shadow, a "magical Yakuza" trying to summon a demon; the Tech Lords, a high-tech cult threatening to knock out the world's computer systems; and The Claw, a crew of mad biochemists seeking to release a toxin to mutate all of mankind.

The player will face all three groups simultaneously, and the relative strength and resources of each group will be generated randomly at the beginning of each game, leaving it up to the player to find out which is the weakest and how to best allocate resources to defeating the forces of evil. "Each of the different groups have a unifying but different style of powers and abilities," Ward explains,

Like X-COM, Agents is structured around turn-based missions

on the Champions pen-and-paper game system, was lost in publisher limbo over two years ago, which at least in part is what prompted Chris Ward, along with producer Steve Garcia, to begin work on Agents of Justice. "It's simple," says Ward, "for the longest time I really wanted to play a superhero game, and so finally I thought, if this is going to happen I'd better develop it."

Agents of Justice, based on an original superhero universe of Ward's design, bears a more than passing resemblance to Microprose's X-COM series, although Ward claims, "It's like it, in that it's isometric, 3D tactical combat, but the X-COM group is an external group. We don't use any X-COM code."

Like X-COM, Agents is structured around a series of turn-based missions,



The World Map shows where trouble occurs — but It's not X-COM. Really



The game's missions are generated randomly, and each successful battle brings the player closer to finding each villainous organization's base

"so particular heroes that you control are better suited to fighting certain groups. For example, the Shadow tend to use ninja types, and a lot of them use a power called 'darkness,' so you'll need someone with superior sight to see them — they're difficult to hit and evade. Whereas the Tech Lords use big robots, and they're just downright tough — not hard to hit but heavily armored."

The game will make available between ten and 14 heroes (the exact number has yet to be decided); the player can choose from, each with a selection of 12 different powers which can be "bought," based on a point system similar to that found in many RPGs. "Basically each hero is a character concept," Ward continues. "You're not forced to be this character or buy all the powers, but there is an overlying theme for each character, and the powers maintain that theme." Powers include abilities such as Energy Blast, Flight, X-Ray Vision, and Armor; and these powers can then be modified — an Energy Blast, for example, can be armor-piercing or explosive. In addition to Powers are Skills, which include "normal"

abilities such as acrobatics, hand-to-hand combat, and detective skills.

The character archetypes, however, are not meant to emulate classic comic book superheroes, but grew out of Ward's experience with pen-and-paper superhero RPGs such as *Heroes Unlimited* and *Champions*. "In fact, I was a power player," Ward boasts. "We'd play them as if they were tactical wargames. So I know from this there are specific types of characters that every group always seems to need. Like a 'brick' — our 'brick' is Quake, a big rock guy who's really tough, very strong, uses a lot of hand-to-hand combat skills. Then you need some 'ray blasters,' who have a powerful attack that has range. There are themes which, if you play any of the superhero role-playing games, are all common, so we included as many as we could, and made sure we gave a big enough spread that the characters complement each other well."

Ward concludes, "No matter how you look at it, there are always going to be some characters which you feel are better than others, because they adapt better to your style of gameplay. Everybody has their own style, and so that mixture is something they're going to have to find out for themselves, but we're doing everything we can to make sure the characters are balanced."

ng



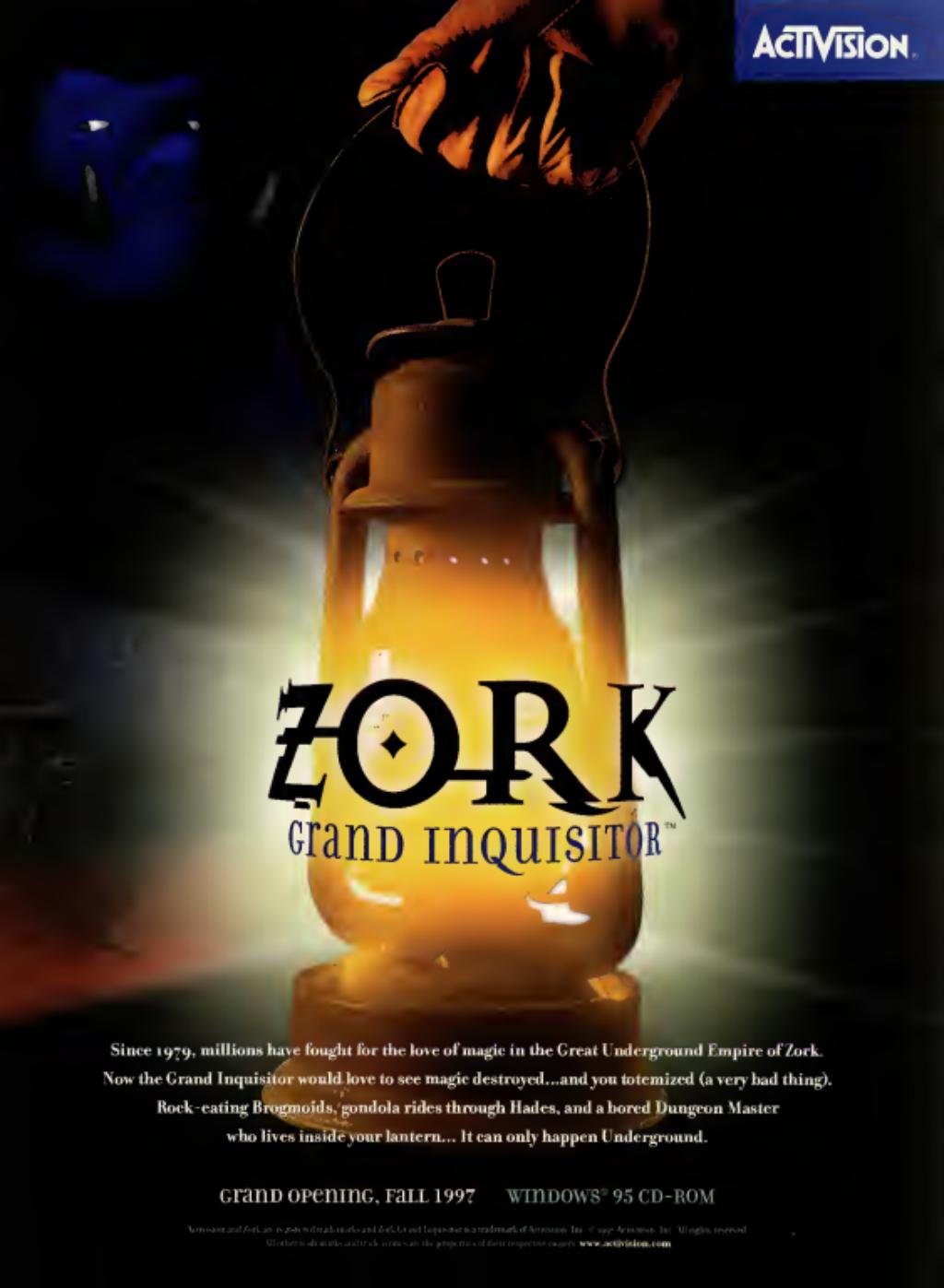
The characters grew out of designer Chris Ward's experience with pen-and-paper superhero RPGs, but the player can easily modify each character

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Die by the Sword



The bright textures stay sharp, whether the camera is zoomed out (above), or up close and personal in a decapitation (right)

Five years of work went into the physics engine alone, but can Treyarch dethrone Core as the kings of third-person adventure?



When asked about the influences for his upcoming 3D combat adventure *Die by the Sword*, project leader Peter Akermann's response was very encouraging to any longtime gamer. "One of the inspirations was the old Apple II game *Alastor*. It's still one of

"I was kind of disappointed by Virtua Fighter"

PHOTO: ANDREW PHILIP / IMAGE TRUST



my favorite games, and it was totally original." Akermann is right. More than 10 years later, that overhead fighter still provides a level of control that is unequaled by any game.

Die by the Sword may change that. The game looks and plays a bit like *Tomb Raider*, with the same third-person perspective and extremely fluid character animation.

"When *Tomb Raider* came out, we were a little dismayed," Akermann concedes. "We'd been running around for a year hacking off people's limbs. But *Tomb Raider* was done very well." Instead of the basic point-and-shoot control of *Tomb Raider*, however, *DBTS* offers complete control over the character's attacks. Each button on the number pad corresponds to a location where the



There are more than 20 creatures, including this frightening mantis

Format:	PC
Publisher:	Interplay
Developer:	Treyarch
Release Date:	Winter 1997
Origin:	U.S.

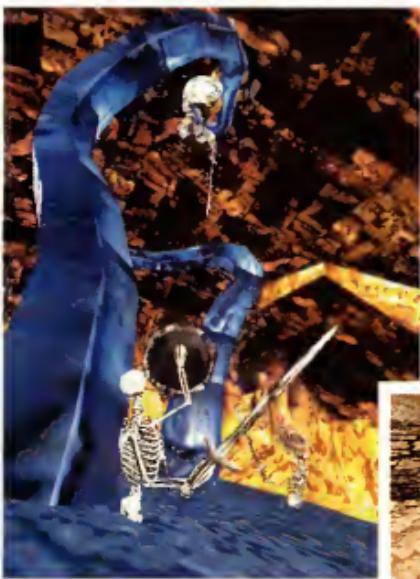
character can swing his weapon.

There are more than 20 creatures in *DBTS*, ranging from the mundane (humans, skeletons) to the exotic (a bizarre tentacled beast 20 times larger than a human, capable of picking up attackers and throwing them against walls). A subset of these creatures are selectable in a melee mode similar to *Star Control*; players can choose from one to four creatures to fight against a second player or the computer, in what can best be described as a stripped-down *Soul Edge*. Different creatures have different attacks and attributes, but they all share the number pad weapon control.

The comparisons to *Tomb Raider* are unavoidable; both games use a physics model for animation instead of motion capture. In *DBTS*'s case, however, the physics engine is the result of five years of post-graduate and doctorate work by Akermann. "It was always meant to be a game, though," he adds. "When I saw *Virtua Fighter*, I saw what could be done. But at the same time, I was kind of



Fighting is the core of the game, be it against skeletons (above), magma beasts (left), or ogres (below left)



This huge tentacled beast attacks friend and foe alike (above). Objects like this turnstile (right) add to the game's interactivity



disappointed by it, because it was just Street Fighter with polygons."

The melee mode is an interesting feature, but where DB7S really excels is in its adventure mode. It should exceed Tomb Raider in nearly every way from the level of interaction with the environments

"One of the inspirations was the old Apple II game *Bildestad*"

Peter Alström Project Leader, Troynich

to the number of solutions available to each problem. In one scene, goblins and their skeleton overseers are loading boxes onto a ship headed down river. One option, of course, is to dash sword-first into the fray, kill all the enemies, and commandeer the boat. Alternatively, the player can surreptitiously climb into one of the boxes and be loaded onto the boat by an unsuspecting lad. Depth like this is what makes DB7S a treat to watch out for.

When *Die by the Sword* is released, its main competition will likely be the most popular game of its type for the PC, Tomb Raider 2. Whether or not the game will outperform Core's highly anticipated sequel — or Eldos's other 3rd person fighter, Deathtrap Dungeon — remains to be seen, but DB7S certainly has what it takes to compete.

ng

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TELSTAR

Earthworm Jim 3D



Jim surfs the "stele" on a sausage snowboard in e sub game (top)

"I keep waking up in the morning and thinking, 'How the hell did we manage to get this?'" exclaims Chris van der Kuyl, Vis Interactive's CEO. Indeed, few videogame companies can boast of having secured the development of one of the industry's biggest titles without having previously developed a single game.

Although Jim's creators maintain the right of approval, Vis was given carte blanche over the game's design. As the title suggests, Jim's antics take place in true 3D, allowing total freedom of movement within the game. But van der Kuyl quickly points out this is not merely a straight platform game with a 3D coat of paint. "We're not trying to do a shiny, glossy Jim — he's going to look like a cartoon but in full 3D. If we tried to do the original Jim games in 3D, we would have all sorts of horrendous problems. There are platforms and all those things. This is a much more open game."

In the game, Jim has suffered a severe blow to his head which has left him trapped within his own mind. The player's task is to repair his cerebral cortex by venturing into different areas of Jim's psyche, exploring his phobias, childhood memories, and fantasies, and repressing them.

Jim's off-kilter persona is reflected in the game's 30 stages. He travels through five worlds, each

Following a long trail of his 16-bit brethren Jim goes 3D, but without his original designers to guide him along the z-axis

Format:	Nintendo 64, PC, Playstation
Publisher:	Interplay
Developer:	Vis Interactive
Release Date:	Q1 1998
Origin:	Scotland



Even without the personal supervision of Doug TenNapel and David Perry, the designers at vis have come up with some odd Jim antics



Disco zombies? Old ladies with walkers? Vis let its imagination run wild when coming up with characters to stock the game

representing different areas of his brain. "Happiness" finds him on a giant pizza where he has to struggle over toppings while avoiding hazards; "Fear" includes a range of classic horror clichés stemming from his over-consumption of B-flicks; and "Fantasy" indulges his long-standing desire to become a sheriff in a Wild West town. The whole experience resembles something that might have materialized out of David Lynch's mind.

The game is being developed for N64, PlayStation, and PC, but there will be differences between the three versions, as van der Kuyl explains: "N64 will include all of the technological tricks that the machine allows. The PC version is in 3D, so with the right card it will look as good as N64. PlayStation will have a few different things since Jim will never be exactly the same on it."



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Don't expect any citizen-of-the-month award. Expect spine-tingling action, hair-raising crashes and the never-seen-before track cam view.



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EverQuest



Since the entire world is polygonal, the characters look like they belong in the world, a feat sprites can't quite pull off

Sony enters the online market in a big way with a direct challenge to *Ultima Online*



Huge new trends in gaming are rare, but those that do occur usually change the very makeup of the industry. Games like *Wolfenstein 3D*, *Dune II*, and, regrettably, *Myst* have changed the way gamers think, play, and buy. None of these, however, has the chance to redefine the world of gaming the way online RPGs do. Many companies were quick to capitalize, including 3DO, with its unpolished *Mendian 59*, and Origin, whose daunting *Ultima Online* is one of the most anticipated titles in recent memory. Sierra was also quick to jump on the bandwagon with its well-executed title, *The Realm*. But surprisingly, one of the most promising

Format: Online

Publisher: SCEA

Developer: SISA

Release Date: TBA

Origin: U.S.



A dwarf, however powerful, is still a dwarf, and as such is quite easily dispatched by a larger, more skilled foe

online RPGs comes from PC and RPG rookie Sony Interactive Studios America.

EverQuest, Sony's entry into the volatile market, in many ways surpasses Mendian 59, the game it most closely resembles. There are 12 races to choose from, including the rarely selectable ogre and troll. There are hundreds of learnable spells, divided among five magic-using classes. And the game will certainly move better than most; all of the objects are polygonal instead of sprite-based, meaning the monsters move like monsters instead of oddly shuffling toward the player. The game runs in 16-bit, 640-by-480 resolution, with native 3Dfx and Direct3D support.

Sony has elected to offer multiple camera views for EverQuest, from a first-person mode (resembling a polygonal *Caggerfall*) to several top-down views used to facilitate tactical combat. The polygonal characters look distinct in first-person mode, the size difference between ogres and dwarves is



Everything looks great, despite the servers' heavy workload

particularly striking. The characters themselves look rather blocky, but that is to be expected. The EverQuest servers are designed to accommodate over 1,000 players each, simultaneously.

The world of EverQuest is a true persistent environment, and a very realistic one; the environments range

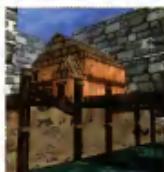
The servers can accommodate over 1,000 players each

from standard dungeons to deserts, tundra, and underwater areas (only navigable after the casting of a water breathing spell). In addition to the five continents, there are alternate dimensions and otherworldly planes to explore as well.

Character skills very appropriately according to class, warrior classes can learn how to disarm their opponents, rogues eventually acquire the pick locks skill, magic users can transcribe scrolls to their spellbooks, and so on. All classes will have the ability to plot (kill other players) if they desire, but even players who decide against it are not completely immune. Organizing a party is encouraged for venturing on quests, but



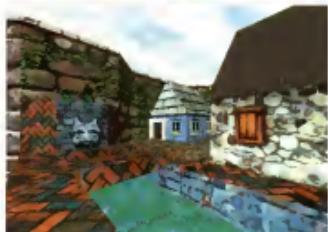
Rarely has a game combined great graphics with strong player interaction



players will still be able to lead the life of a wandering mercenary if they desire. SISA also promises the same career freedom found in Ultima Online: characters will be able to roleplay merchants, thieves, knights, or whatever strikes their fancy.

With so much of Sony's marketing muscle devoted to PlayStation, though, it is an open question as to whether EverQuest will get the support it deserves. Until now, it took a lucky wander through Sony's Station.com site to even learn that Sony is doing native PC development at all — you might think the excellent online-only tank game, *Titanus*, was a state secret for all the publicity it gets. EverQuest could be Ultima Online's biggest competitor for the online RPG crown, hopefully the marketers in Foster City will not forsake it.

ng



Violence (above) is one of many options available to disagreeing characters. EverQuest looks this good no matter how many characters are onscreen (above left)

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I
F HEAVEN IS ANYTHING LIKE
WRIGLEY FIELD ON A SATURDAY AFTERNOON,
THEN DEATH WOULDN'T BE SUCH A BAD THING.

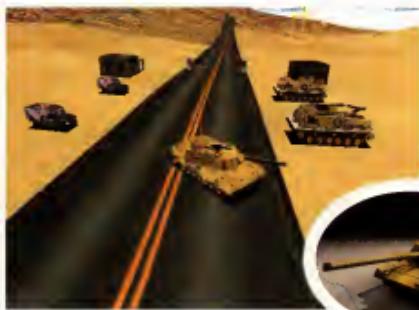


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SpearHead



SpearHead features numerous views, including an overhead view, which might be helpful if you want to take the 70+ ton M1A2 out on the open road at speeds of more than 60 mph.

Having formed a dynamic development duo, Mak Technologies and Zombie bring real military experience to the art of the sim



Seven years ago Warren Katz met Mark Long while collaborating on the Hasbro "Toaster" virtual reality project that never saw daylight. Undaunted, the two have both since established visionary companies: Katz founded Boston-based Mak Technologies, a networking leader for the U.S. military's simulators, and Long co-founded Zombie, the Seattle-based next-generation game developer. Realizing the potential possibilities of a collaboration, the two have pooled their cumulative company talents for SpearHead, an Abrams M1A2 tank sim for PC.

SpearHead will be the first tank sim with 3D accelerator support

Set in 1998, SpearHead takes players to Tunisia, where they must use a tank to repel invading Libyan forces. With 50 single-player and 20 multiplayer missions, SpearHead's battles take place in five different time-of-day and weather condition variables — dawn, noon, dusk, night, and storm. Players have several internal and external camera perspectives to choose from.

According to Zombie producer John

Format:	PC
Publisher:	US: TBA; International: BMG
Developer:	Mak Technologies/Zombie
Release Date:	4th Quarter 1997
Origin:	U.S.



Williamson, play-balancing the game while keeping it realistic was the biggest design challenge from the outset. "Most of the reality of the military is hours of monotony broken up by seconds of sheer panic," says Williamson, who along with Katz has spent years working with military simulators. "So the trick is to cut away the hours of boredom, and focus on giving the player enough things to do, while still keeping things accurate."

So how have Zombie and Mak divided the workload? "Zombie's responsible for the art direction and the game design, and providing the art assets," explains Williamson. He goes on to say that while Mak is technically only a sub-contractor on Spearhead, it's brought invaluable experience to the project, including 16-person simultaneous Internet play. "They're responsible for the coding and the technical work," Williamson says, "and making sure that I don't ask for the impossible, like 600 million polygons going at once. [Laughs.]"

While 600 million simultaneous polys are out of the question, Zombie and Mak have done a fantastic job pushing 3D polygonal environments. Spearhead will be the first tank sim to market with 3D accelerator support for the 3DFX-chipset, and possibly Rendition's as well. "I wanted to have the whole screen be 3D," Williamson says, "as opposed to a lot of

games where you play the game through a cockpit so half the screen is a 2D sprite and the rest of the screen is 3D." Williamson also notes that they've opted to go full-screen, avoiding little windows or a cockpit view. "I'm very proud of the fact," he adds, "that all the texture maps you see, with rare exception, are photographs of real vehicles." Zombie even consulted satellite images ofuria before building a 16-by-24 square kilometer map, upon which all battles are based. But the team hasn't stopped there, populating environments with polygonal people, and implementing special effects, including dynamically lit particle-system explosions, and a MechWarrior-like "thermal vision" mode.

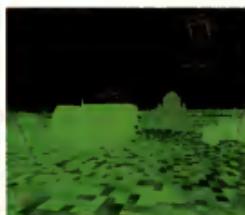
More than just eye candy, Spearhead incorporates real tank physics and ballistic models that take range and shell type into account. For the audio, Williamson explains that he spent time on military bases recording audio samples of real tanks, and that other sound samples came directly from the military's SimNet. "All the sound," Williamson says, "is 3D spatialized audio, so when a tank drives by the left, it sounds like it's on your left."

Due to BMG's publishing withdrawal from the U.S. market, Zombie is currently shopping the game to distributors; although nothing was finalized by press time. Assuming a deal comes through, the game will be on store shelves this year.

Mak also recently won a contract to develop a Marine training game for the Department of Defense, (tentatively entitled MEU-3D) and Katz already is suggesting that Mak will again team with Zombie for that title. While still a few months out, Spearhead already proves that Mak and Zombie's symbiotic development relationship is a successful one.



Both Mak and Zombie staff have experience on the US military's SimNet



Thermal vision (above) lends support to night missions. Actual photos make up the textures, as in these buildings (left)

An interview with

Warren Katz

As the president of Mak Technologies, Warren Katz has secured the first contract to generate an original commercial-style game for the Department of Defense. (Battlezone and Doom were pre-existing titles that were modified for the military.) A smiling Katz discusses how his military simulation company is adapting to the gaming business.

Next Generation: Can you give us a brief overview of Mak Technologies?

Warren Katz: It's a very robust company; we have three main divisions: A division that sells commercial software products to the Department of Defense, and to international customers that develop simulation products for their governments. We have a contract research and development division, so can get governmental grants to research new networking protocols or new terrain database technologies. And the videogame group, which is smaller than the other two but growing rather rapidly and making use of the huge cache of technology we keep generating in the other two divisions.

NG: Prior to the games, most of Mak's work has been for SimNet. Can you explain SimNet?

WK: SimNet was an experiment started in 1983. At that point, training in the U.S. Army and throughout the U.S. Department of Defense was more of a single-cockpit trainer where you'd train the person how to fly or how to drive a tank. What they did not have, and what they needed very badly, was a way to train teams to work on collaborative tasks. SimNet was intended to network a large number of simulators together so the government could conduct combined arms tactical training exercises.

The project wound up being a wild success and in 1990 the Department of Defense mandated the use of a standard called DIS (Distributor Interactive Simulation). Anybody who wanted to sell a simulator to the U.S. government from that point on was required to make it DIS compliant. So that's where Mak came in. We came up with the first DIS networking toolkit in the industry in 1992, and since that time Mak Technologies has become the world's leading supplier of DIS software to the worldwide military simulation market.

NG: SpearHead uses some of SimNet's technology, correct?

WK: There's actually quite a bit of military-funded software in that game right now. The protocol we use in SpearHead is actually

something called "DIS Lite", which is a chopped-down version of DIS. The Air Force actually wanted a lighter-weight, leaner, meaner version of DIS for air-to-air combat, and they paid us to develop DIS Lite which wound up being extremely suitable for that game environment.

NG: Does SpearHead use direct audio samples from SimNet?

WK: Yes. I worked in the SimNet system for my last company and I spent many hours in the tank simulator so it's pretty bizarre for me to hear the sounds I am so used to from that simulator coming out of the game.



"The Department of Defense will pay a major portion of our developing costs"

NG: As far as visuals go, how does SpearHead compare to SimNet's graphics?

WK: To be quite frank, the graphics performance in SpearHead exceeds the performance of the SimNet system. Ten years ago, the SimNet image generator cost about \$100,000. Today, for \$2,000 your PC will outperform it.

NG: So what's the deal with your gaming partnership with the Department of Defense?

WK: We have proposed a game development project to the Marines, it's called MEU-31 [MEU stands for Marine Expeditionary Unit]. Essentially, the Department of Defense is going to pay us a major fraction of our developing costs so that they can use the game as a trainer for Marines.

So we're getting approximately half the funding from the DoD, half the funding is coming from a commercial game publisher, and we intend to produce an extremely realistic Marine amphibious assault game. The Marines are actually going to help us with the subject matter expertise and the game design and the game contents. On the game publisher side, they're going to help us make it fun and appeal to a

mass market. What the DoD gets out of this is a very professionally-made training product at \$0 cents on the dollar, and they can buy as many copies as they want for \$39.95, which is an unheard-of low price in the DoD.

On the commercial side, getting the endorsements of the U.S. Marines and getting their assistance in development will make it hyper-realistic, unparalleled in the games industry.

NG: Any other outstanding MEU-31 features you can share with us now?

WK: The really interesting thing is that MEU-31 is going to be network-compatible with SpearHead. And that's a first in the industry. Never before have two network titles been network-compatible such that each player in a different game can see the other players and interact with them.

NG: Have you done any special work with SpearHead to insure this?

WK: We'll probably have to release an updated version of SpearHead to have the same exact terrain database as the MEU game. It opens up tremendous possibilities as far as having very large-scale battlefields, and having a large number of sim games linked together. Tank games, flight-sim games, submarine games, surface ship games, all fighting in the same war.

NG: How far along is MEU?

WK: We're entering the design phase for the non-DoD components, in the final selection process for our publisher, and I expect that we will go into full design swing in the summer and go to full development in the fall.

NG: So will zombie also be involved in MEU?

WK: Yeah, we liked the model of Spearhead so much that we are going to try and work with the model in MEU. In this case Mak will be more in charge of the business aspects of the contract since we are doing all the work with the military.

NG: Will there be more than one version?

WK: There are going to be two versions. We obviously don't want to release classified data to the public which the Marines would like to keep quiet. Things like weapons characteristics.

NG: Do you feel you have an edge in that you receive classified sim information that isn't publicly available?

WK: We obviously aren't being given any classified information that we can use outside of classified programs. That's illegal. A lot of classified data is actually quite boring and not useful, though, despite its secrecy.



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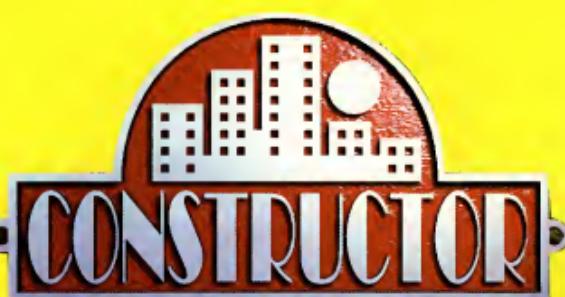


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Killwheel



PlayStation has established itself so well in the top-selling genres (sports, racing, fighting) that it's getting hard to find anything new. Apt Productions, formerly Caps, (X-Men 2, Pink Panther, and Tar 2 for Genesis) hopes to change that with *Killwheel*, a bizarre new action game.

It's hard to categorize *Killwheel* — a game in which the player drives a large, destructive wheel on a mad doomsday roll, crushing buildings and clubbing opponents for points. VP of product development, Richard Robinson, tried to capture the tone of the game when he told *Next Generation*, "It's like *Rampage*, in that we want the players to just have fun with it."

Set in a fantasy realm, players assume the roll of a two-headed ogre who "killwheels" over villages of dwarves, elves, and halflings. From a chase-view perspective, the player must navigate more than 20 half-pipe shaped tracks,



Halflings attack from aerial balloons (above) and will voraciously chase the player on foot when the Killwheel crushes their tavern (top)

HeadGames turns a two-headed ogre's rite of passage into a freewheeling, elf-killing, hobbit-crushing, gaming experience



The forward scrolling valley terrain is reminiscent of *Total Eclipse*. The strongholds in this later level (above) are difficult to destroy

Format:	PlayStation
Publisher:	TBA
Developer:	Apt Productions/HeadGames
Release Date:	Q1 1998
Origin:	U.S.

which lend a "snowboarding game" feel (players can pull 360° in-air spins off jumps) to the title. Otherwise the driving-combo gameplay most closely compares to *Road Rash*.

As in *Road Rash*, players can upgrade their weapons and gain access to better vehicles — in this case, more powerful Killwheels. Granted, they'll first have to survive each course and successfully complete it under the time limit.

The game is set to run at 30 fps, and was developed solely with proprietary tools. Each wheel model is more than 1,000 polygons, and each boss averages over 800 polygons.

Killwheel may not offer the variety or polish of Nintendo's *Blast Corps*, but it's along the same novel lines and should attract gamers who want fast-paced destruction. And let's face it, who doesn't, at least sometimes?



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Monster Rancher

Tecmo continues its recent innovative streak with the most bizarre — and innovative — PlayStation title since *Tail of the Sun*



The player's job is to control every aspect of the monster's life, from its birth (bottom left) to encounters with other monsters in town (top left) to the inevitable clash between the various monsters in the game (above)

Techno's 8- and 16-bit histories read like an EKG: innovative games like Tecmo Bowl and Ninja Gaiden followed by a glut of scarcely improved sequels. Recently, however, Tecmo has arisen from its design slumber and come up with some very interesting titles: Decoptron, the Model 2-based Dead or Alive fighting game, and now *Monster Rancher*.

Monster Rancher doesn't fit neatly into any genre. It is perhaps best

Monsters are created by sampling any of the player's audio CDs

described as a breeding sim with RPG-like combat. The player's job is to create a monster based, believe it or not, on samplings of audio CDs. The game actually prompts the player to insert an audio CD of his or her choosing and then scans it for information (song length, number of tracks, etc.) to define the monster's strength, abilities, and appearance. (Monsters can also be

Format:	PlayStation
Publisher:	Tecmo
Developer:	Tecmo of Japan
Release Date:	TBA
Origin:	Japan

generated randomly as well.)

Tecmo's Dimitri Crnoja describes what comes next: "You have to train your monster, take it to town, put it into fights — you have to really control it as if it were a pet."

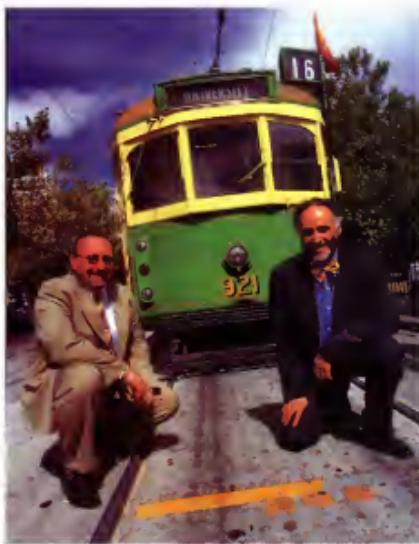
But what a dangerous pet. Once the creation process is complete, the player acts as its manager, controlling it in fights against other monsters. Tecmo is promising multiplayer support, with at least one mode set in stone: monsters can be saved to memory cards, taken to other Playstations, and pitted against other players' creations.

That is, if anyone else has the game. Its appeal may not be as wide as Tecmo's earlier efforts, but *Monster Rancher* certainly deserves a look, and Tecmo deserves commendation for taking the road less traveled.



There are over 250 different monster styles

Melbourne House



Managing director Adam Lancman (left) and chairman Fred Milgrom have kept Melbourne House on track for a remarkable 18 years



Never heard of Melbourne House? Shame on you, Australia's premier game developer has been making games since 1980, and now it's planning a return to the limelight.

In Europe back in the early 1980s, Atan didn't have the same stranglehold over the videogaming industry that it enjoyed in the US, and the Commodore 64 and Sinclair Spectrum (both 8-bit home computers) were the game-playing platforms of choice. Because you didn't need a license to produce games for these machines, the door was left open for anyone to make a game and publish it. This time period is one of the classic gold-rush, experimental eras of Western game development, and spawned such veteran game companies as Ocean, US Gold, and Ultimate Play The Game (which would later

Melbourne, Australia is home to one of gaming's longest running development houses

change its name to Rael). But before all of these companies were even drawing up design documents, Melbourne House (the publishing label of Beam Software) had become the premiere game label of an entire generation. "You'd have to go to Japan to find a game developer who started before we did and are still going strong," says Alfred Milgrom, Chairman of Beam International, smiling with a justified sense of pride.

The company first shot to center stage in 1982 with *The Hobbit* (arguably

"You'd have to go to Japan to find a developer who started before we did and are still going strong"

Alfred Milgrom, Managing Director

the first graphic adventure, based on the Tolkein novel) and reinforced its status in 1985 with *Way of The Exploding Fist*, (a one-on-one karate game, undoubtedly inspirational to modern 2D fighters) which sold 500,000 copies across Europe. With a supporting cast of solid titles such as



Unlike Krash Kill 'n' Destroy (top left), Cricket '97 (above left) will probably never see the US. The KKID team (right) takes a break



They don't all ride the same train to work, but the Alien Earth team is spending plenty of time together on the company's next PC adventure

1983's *Penetrator* (a *Scramble* clone), 1984's *Lord Of The Rings* (the much anticipated follow-up to *The Hobbit*), and 1986's *Rock 'n' Wrestle* (the first wrestling game for computer formats), Melbourne House blazed a trail that others would follow. Shiny's Dave Perry fondly remembers playing Melbourne House games as a kid, and it's certain that many more of today's game designers were first inspired by these Australian pioneers.

In 1987, however, the Melbourne House story seemed to come to a close. "Beam Software was running the development from Australia and Melbourne House was our U.K.-based publishing arm," explains Milgrom. "So we

"We spent a year developing products that went nowhere"

Alfred Milgrom, Managing Director

had the full publishing operation. But around 1988 a lot of our U.K. people went to other companies and at around the same time the industry was moving from 8-bit to 16-bit. It was pretty chaotic. We didn't have the management depth at that time to run both the publishing and development sides of things, so we ended up selling off the whole Melbourne House publishing side to Mastertronic."

From this point on, the Melbourne House name floundered. "Mastertronic decided that Melbourne House should move directly to 16-bit" explains Milgrom, "and as a result we spent a whole year

developing products that went nowhere. They never got published. It was a complete waste of time. A year later Virgin bought Mastertronic and got the *Sega* license — which is what I think they were really interested in all along — made heaps of money, and Melbourne House was left to fall by the wayside."

Beam Software then became a developer of games for other companies, at which it has achieved prolific success. Chances are that over the last ten years you've played more than one Beam game without realizing it. With 28 NES games, 8 Genesis games, 14 Super NES games, 25 GameBoy games, 3 PlayStation games (including *Gex* for Crystal Dynamics), and 2 Saturn games (including *Lost Vikings* 2 for Interplay) under its belt, Beam has kept itself busy. According to Adam Lancman, Beam Software's Managing Director, "We tended to get the jobs that no one else wanted to touch because we were known to have the technological smarts to achieve results in areas that no one else wanted to attempt."

These "technological smarts" are largely born of Beam's need to remain largely self-sufficient. "It's not as if any of us can just pop down the road to visit, say, Metroplex to get answers to questions.



Alien Earth's pre-rendered backgrounds feature Z-buffering. When a player walks behind an object, (top right) they are briefly obscured



The Cricket '97 team gather in front of the city of Melbourne's scenic South Bank. The game is being developed for EA Sports

We largely have to come up with our own solutions and sort out our own problems." According to Lancman, "We wouldn't be here after 17 years if we didn't know how to change with the times and work with new technology."

But the real news with Beam Software in 1997 is that it has relaunched Melbourne House as a label. "Virgin simply let the Melbourne House name lapse," reveals Lancman with a smile. "So we took it back. It's ours again." In March, the Command & Conquer-inspired *Krush Kill 'n' Destroy* (aka *XXnD*) was the first Beam game to be released on the Melbourne House publishing label in almost ten years. "We're still going to continue developing games for other people," explains Lancman, "but we believe we have an understanding of what the punter out there is looking for: we're not driven by the sales and marketing people who often don't have the full picture or knowledge of what it is that's playing these games, so we can produce the games that we want to make for ourselves."

And Melbourne House seems to be producing a little bit of everything. "We don't have a particular specialty of expertise," concedes Milgrom, "but one thing that we will continue producing is non-North American sports games. They're rarely in the Top Ten at year's end, but there's always a strong market for them," he reasons. "We'll produce anything that we think is fun and playable, really."

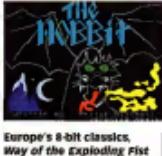
So will we see modern day versions of Melbourne House classics? "I think the only value left in any of our old 8-bit games is in the names of the titles, not in any of the designs or gameplay," admits

Milgrom. But that doesn't mean that the underlying respect for gameplay and playability that made these old games such classics is no longer part of Melbourne House's ethos. "We're looking at the trend towards retro gaming, sure," says Lancman, "and the gameplay that worked in 1980 still has relevance today. We may dress it up in a different way but fundamentally the gaming experience of, say, *Pac-Man* is as valid today as it was 17 years ago."

The development of *Alien Earth*, Beam's current main project due for release through PlayMoto, seems to follow this philosophy. As a follow-up to *Shadowrun*, (1993's critically acclaimed but commercially underachieving Super NES release) *Alien Earth*'s producer, David Giles, hopes to, "Keep the original's gameplay RPG/combat/adventure elements that people liked, but up the graphic side of it." The game is set in a universe where humans face extinction at the hands of alien invaders. Beam is especially proud of the game's visuals, and has employed a 15-person team to ready the title for a late 1997 release.

The company already has plans for future PlayStation and PC games. "But it's unlikely that we'll develop for Nintendo 64," says Milgrom, "because we simply can't afford the cartridge business at the moment." And what success does the new Melbourne House label hope to achieve? "The videogame market is becoming increasingly dominated by seven or eight major publishers," concedes Milgrom, "but that doesn't mean that there isn't room for focused, independent development. The industry needs freshness and innovation — Quake and Doom would never have happened without it."

ng



Europe's 8-bit classics, Way of the Exploding Fist (top) and The Hobbit



Alien Earth is loosely tied to the company's SNES action RPG, Shadowrun

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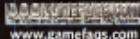
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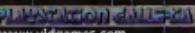
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Calendar of Events

IMAGINE GAMES NETWORK

MON 1

PC GAMER ON THE PALACE

Join the PC Gamer editorial team on the Palace for a chat about gaming. Plus Special Surprise Industry Guest.

TUES 2

THOVF LOGO CONTEST

Sept. 1 kicks off our month-long logo design contest. Prizes include VF keychains, videos, games, etc.

WED 3

POLL: THE NEXT BIG CONSOLE

A special Videogamers.com poll asks you: What is the next console you plan to buy? PlayStation 2, Black Belt, M2, or something else?

THUR 4

VF3: WHERE ARE YOU?

SaturnWorld looks at the current progress of the most anticipated arcade-to-home conversion, and why it's taking so long.

FRI 5

WHAT IS CAPCOM DOING ON N64?

N64.com reports on Capcom's ongoing relationship with Nintendo. What is Capcom doing on N64? Will Nintendo grab exclusive titles on N64 or will Capcom leverage its games across all platforms? A full investigation.

SUPER Q&A DAY

Join the editors of Next Generation Online as they shed light upon your most pressing videogame questions. More than 25 questions will be answered in this double-sized Q&A.

SAT 6

FINAL FANTASY EXTRAVAGANZA

To celebrate the US release of Square's long-awaited RPG, PSXPower explores the series' lasting cultural significance, here and in Japan. We'll cover all the

MON 8

bases, and leave no stones unturned. Bonus! Test your Final Fantasy knowledge in our massive FF Trivia Contest and win tons of awesome FF goodies!

TUES 9

DOWNLOAD DEMENTIA

Five new demos of the hottest PC games will be added to Next Generation Online's ever growing demo collection.

WED 10

ECTS: FULL REPORT

Live from London, England. All the latest developments from Europe's biggest game show will be reported across IGN.

THUR 11*

PALACE SWAP MEET

Join SaturnWorld editors in the Palace and trade some of the coolest Sega-related props and avatars.

FRI 12

BOOTS' NEWEST FEATURES

Mad about your PC. Don't miss the latest features, previews and reviews on bootNet.com.

MON 15

INSIDE 3DFX

Next Generation Online interviews the founders of 3Dfx while also providing an in-depth preview of a hot new 3Dfx-only game.

TUES 16

NEW IGN LAUNCH

Don't miss the launch of a brand new IGN site. GamePlay.com promises to be the fastest source for game news on the web. Find out how, and win a console of your choice.

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S
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WED 17

EVERYTHING ABOUT THE 64DD

The all-purpose 64DD feature. What is the 64-bit disk drive (AKA the Bulky Drive)? What will it do? Why should you buy it? What will the games be like? N64.com delves into the heart of Nintendo's upcoming peripheral, and surfaces with answers.

THUR 18

BACK-TO-SCHOOL LINE-UP

For many, September is the time to return to school. For the games industry, it's the beginning of the big holiday push. In a special feature, PSXPower lets you know which games are the ones to watch out for in the next few months.

FRI 19

WHO'D WIN IN A FIGHT?

It's Kabuki Joe versus Plant 42! Who will be chosen? Join UGP Online's fan fiction contest and win fabulous prizes.

MON 22

IMPORT INVESTIGATION

Japanese import games command a huge market in the US, with gamers going to great lengths (and financial hardships) to secure the latest and greatest overseas titles. PSXPower explores this phenomenon, and takes a look at why some Japanese games get released in the US, and why others never make it. We'll also examine the influx of Japanese cultural icons into the gaming industry, including anime and the mech revolution.

TUES 23

INTERNATIONAL OVERVIEW

N64.Com provides a full international overview of the games released around the world -- in Australia, Europe, Japan, and elsewhere. What's different about these games and what's PAL? We'll bring you the most updated release schedules and list of developers in this all-encompassing feature.

WED 24

OTAKU CONTEST

Lucky you! PSXPower has a ton of cool games-related toys and merchandise laying around the office, and we want you to have it. In typical PSXPower fashion, we're going to make you work for it. All you have to do is send in a 100-word review of the PlayStation game of your choice! Easy, huh?

THUR 25

SATURNWORLD JUKEBOX

Download the RealPlayer plug-in and listen to some of the best Saturn game soundtracks through streaming audio.

FRI 26

CHRISTMAS PICKS

What's going to be hot and what's going to be duds. Ultra Game Players Online reveals its Holiday wish list.

MON 29

RARE BREED

N64.com looks into the blossoming of Nintendo's best business partnership and examines the current crop of games in the works from Rare. Banjo-Kazooie and Conker's Quest are the next level of 3D platformers, but can Rare better Super Mario 64?

TUES 30

DEAD OR ALIVE VS. LAST

BRONX

Can a third-party company, using the same hardware, make a better Saturn fighter than a Sega development team? SaturnWorld checks out the latest between these two hot games.

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at 6pm PST



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Plane Crazy

Microsoft's and Intel's inroads into arcade entertainment begin in earnest



Plane Crazy's levels offer a diversity of scenery. Some require the player to maneuver through tight spaces between rocky cliff faces



Microsoft's and Intel's arcade initiative and, as such, will set the tone for the attempts of the two corporate PC giants to undermine the likes of Sega and Namco on their home ground.

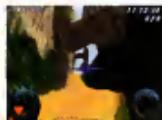
Andrew Walker, head of games development at Inner Workings, is enthusiastic about the economic possibilities of the Microsoft/Intel initiative. "It opens up the whole arcade world for developers and systems integrators. Currently, arcade boxes sell to operators at about \$15,000, and it takes a long time for them to make a profit. What operators get with the Microsoft/Intel machines is the ability, once demand does tail off, to open up the box and replace the CD."

"The starting price for our boxes hasn't been decided, but I reckon it'll come in at around \$7,000," adds Walker's colleague, Mike Lancaster. "A few years ago the U.S. coin-op market was worth \$6

Glasgow-based developer Inner Workings isn't exactly a household name, until now, it has concerned itself with producing children's multimedia CD-ROMs for a number of illustrious publishers, including the BBC (Wallace and Gromit Fun Pack) and Corgi Kindersley (The Jolly Post Office). But its first game, *Plane Crazy*, may catapult it to fame this autumn, whether it lives up to expectations or not.

Plane Crazy is a cube-looking 3D-modeled plane racer with gameplay more akin to a motor-racing game than a flight sim, thanks to a series of courses featuring cliffs and tunnels and topped by an invisible "ceiling" above which the player cannot fly. It's different, fast, attractive, and makes good use of 3D graphics cards via Direct3D.

But the most startling thing about it is that it will appear as a coin-op in December, running on arcade boxes that are essentially pumped-up PCs, before shipping for Windows 95 and PlayStation early next year. In other words, it's the first game designed to take advantage of



The plane may not be realistic, but it is certainly fun to fly



The technology may be cutting-edge, but the visuals retain a rather basic — if wonderfully textured — feel



The game should have the appeal of a racing title thanks to fast speed

billion, but it has now come down to \$2 billion because the machines are more expensive and there's less choice."

On the basis that Microsoft/Intel machines will be about half the price of current machines and easily upgradeable,

year innovations like AGP will become increasingly important."

If you find a *Plane Crazy* machine this winter, check out how it stacks up against its peers, bearing in mind that under the hood will be a 266MHz Pentium II, at least 32MB of RAM, a 3Dfx card, a USB controller and a 24-speed CD-ROM drive.

There are some unsolved questions, such as how developers will be paid if arcade operators start putting off-the-shelf games in their machines (which would be illegal under current U.S. law). Walker doesn't regard that as a problem, and prefers to dwell on the potential advantages, such as the intriguing prospect of including modems in the arcade boxes. He also points out that CD-based games make it easier to sell localised advertising. But his ultimate ambition is "to get arcade machines back into the convenience stores and fast-food joints, and thus expand the market."

Considering the state the arcade industry is in today, **Next Generation** certainly hopes *Plane Crazy* helps to achieve just that aim.



Walker and Lancaster think they will be greeted as saviors by beleaguered arcade owners. But can these boxes really compete with high-powered arcade machines? Lancaster reckons that they can. "If you look, say, at Sega's range, its games have only gotten slightly better from Daytona through Sega Rally to Super GT," he claims.

Walker believes that 3D-accelerated games on PC are now fully on par with cutting edge arcade games. "3D accelerator technology is the key, along with the idea of generic software provided by DirectX support. I'm sure that Microsoft and Intel will publish a new spec every

Though much of the game's scenery is fairly straightforward, some elements, like the town (above), bear a great deal of detail



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The way games ought to be...

In search of the future of gameplay

How force-feedback gives computers another way to communicate with gamers

Imagine a creature that can't talk, can't make any facial expressions, can't gesture with its hands, and can't read or write. Imagine that all the other creatures in its world have exactly the same limitations as it does. Furthermore, imagine that although this creature can see its immediate surroundings, it can't taste anything, it can't smell anything, and it can't feel anything.

This creature sounds as if it leads a lonely, very basic existence, doesn't it?

Now, imagine that the only real power this creature has in the silent, hypothetical world it inhabits is the ability to move in one of eight directions (at only one speed) and then stop. It can also jump up and down. It also has a couple of things that it can turn on or off to "use"—one might be a laser gun, the other might be a teleporter—but these things can only be used for their designated purpose.

This life-form seems sure seems primitive, in fact, doesn't this "life" seem akin to that of a one-dimensional robot? Or perhaps a newborn baby left in its playpen with a couple of toys? It does seem to resemble both of these, but what I've described is, in fact, the role offered to players by the majority of videogames in 1997. Gaming, when you think about it, doesn't come close to truly simulating the complexity and sophistication real life—but hope is at hand. The games that we have to look forward to in the years to come will, in terms of depth and realism, be light years ahead of the games that we enjoy today. We'll have games with real conversations, deep personal relationships, and hyper-realistic artificial personalities.

Last month I talked about how the introduction of analog controllers is such a significant step forward. Analog controllers are joypads and joysticks, such as the Nintendo 64 "pad," that offer shades of gray as opposed to the simple "on" or "off" of traditional digital pads. The idea is that if playing a game can be thought of as a conversation between the game player and the computer, then the more complex this conversation, the more deep and involved our games will be. It's the same with a real conversation; the greater a person's ability to communicate and express him or herself, the more interesting his or her conversation with other humans will be.

In the "conversation," between computer and player the computer "speaks" via images on its monitor and sound through its speakers, and the player "speaks" by sending signals to the computer via a joypad or keyboard.

Conversely, the computer "listens" through a keyboard or joypad, and the player "listens" using his or her eyes and ears. Analog control is a great step forward because it vastly increases the "vocabulary" of words available to the player in this hypothetical conversation, and this enhanced vocabulary makes for a more complex conversation. Instead of just saying "move left," or "don't move at all," with an analog controller a player can say "move full left," "move halfway left," "move a little bit left," or all manner of degrees in-between. If you compare this to a real conversation between two humans concerning, say, how much one person enjoyed a movie, it's the difference between merely being able to say "Yes, I

control helps games in the same way.

The month, however, I want to talk about a way in which the computer's communicative skills are getting a boost, and how this will also enrich the "conversation" between computer and player. Sure, the computer already has a sizeable advantage over the player in terms of "vocabulary"—it can show pictures and emit sounds, whereas the player is restricted to button presses. But this imbalance is somewhat deliberate, designed to cut the computer some slack given the vast difference in "intelligence" between the player and the machine (you're the smart one, by the way). So, given that the computer needs all the help it can get, by adding an extra dimension to its repertoire of communication the "conversation" is enhanced.

Within the next couple of years, all PC games will feature some kind of force feedback

enjoyed it" or "No, I didn't enjoy it" and being able to say "I loved it," "I thought it was very good," "It was OK," "I thought it was poor," "I hated it," or any other amount in-between. It's this richness of expression available to humans that makes the difference between a dull conversation and an interesting one, and analog



Microsoft's force feedback stick features the impressive industrial design of the original Sidewinder stick.

This extra dimension I'm referring to is force feedback control, and it's my guess that within the next couple of years, all PC games will feature some kind of force feedback

element—and that no PC gamer will consider himself "hardcore" unless his rig contains an element of force feedback control. I'd also bet my copy of Super Bomberman 2 (and I don't wager this lightly) that the next generation of consoles come complete with real force feedback pads, not the mere buzzing of Nintendo's Rumble Pak or Sony's (Japanese) analog pad. Sure, it goes against the hardware company's prime objective of keeping hardware costs down to a minimum, but this is such an exciting new element of the videogame experience that I don't see how they can turn it down. Certainly force feedback was hot news at this year's E3. In the absence of any spanking new gaming systems from Sega, Sony, or Nintendo, the assortment of force-feedback joysticks on offer were easily the most exciting new hardware at the show. Microsoft, CH Products, Immersion, and more all had booths crammed with force-feedback 'sticks and 'wheels'—and no shortage of show attendees lining up to give 'em a try. This is always a good sign that a technology's on the up and up.

So what exactly is force feedback, and why



by Neil West

Neil West is
Next Generation's
editor-at-large

is it so damned important? Arcade-players and high-end simulator jocks are already familiar with the way that "active" controls can add to a gaming experience in the arcade version of Sega's *Daltonia USA*; for instance, the steering wheel shakes if the player veers onto the hard shoulder (this is considered "canned" force feedback, as the game only turns a preset shake generator on or off). Similar devices exist in many arcade games, the first title I remember featuring it to good effect was *Cutfun*, another Sega AM2 racer. But canned feedback isn't what we're interested in here. No, the future belongs to the kind of feedback found in a high-end flight simulator, where often your entire chair will buck and jolt in accordance to your plane's movements. This kind of responsive, generated-on-the-fly motion is called "smart" force feedback, as it reacts in real time to the specific game environment.

When this smart force feedback is incorporated into a joystick (as opposed to, say, an entire moving cockpit in a commercial flight simulator) it means that the stick moves — or rather (and "in the field" so to speak) the stick applies pressure to the player's grip and increases or minimizes resistance to the player's joystick movements. So, for example, supposing the game you are playing is a racing game and you are attempting a very sharp right hand turn. In this instance the joystick's motors will attempt to force the stick to the left — hence requiring the player to push harder into the turn, and hence creating a sensation of the G-forces involved with such a turn. And because this is smart force feedback, the tighter the turn and the greater the speed at which you attempt to take it, the greater this pressure will be. Another application of smart force feedback would be in, say, a boom clone in which the joystick "twitches" to indicate that you've taken a hit. Canned force feedback might simply "vibrate" or "twitch" the stick (as in the Rumble Pack that accompanies *Star Fox*), but smart force feedback triggers a motion that varies both in direction (in accordance to which direction the bullet came from) and in magnitude (depending on whether it was a mere bullet or a 50-pound cannon ball that had your number written on it).

The two main companies developing force feedback technology for the home are Microsoft, who haven't quite shipped their unit yet, and Immersion Corp., based in Sunnyvale, CA. Immersion Corp.'s president Louis Rosenthal explains that a force feedback

joystick, "is basically an input device, like a traditional joystick, but also an output device — the computer can command forces to the joystick handle and create a variety of different sensations." And how does it work? "There are actuators on each of the joystick's axis," Rosenthal explains, "so the computer can independently command a force to the X or Y axis. It's much more sophisticated than a traditional joystick — it has its own processors. Essentially, it's a robot that looks like a joystick

Essentially, force feedback is comparable to the difference between speaking over the phone versus speaking in person

and sits on your desk."

The latest generation of smart force feedback joysticks on show at E3 all offer limited "smart" force feedback; I say limited because practical limitations have prevented manufacturers from giving the sticks any real muscle (it would be both costly and potentially dangerous) and the result is that feeling the stick "bump" at its maximum extent isn't super impressive in a game, however, the experience is definitely enhanced, because you aren't concentrating solely on how much your hand is moving. Done right, it's an unequalled experience. Added as an afterthought (as it has been in most feedback-enabled games on the market), and it's a nice gimmick. With more titles being developed from the ground up to take advantage of feedback, there will be less "gimmickiness" in future titles.

So, back to our "conversation" between game player and computer. What force feedback does is open up a whole new

repertoire of communication for the computer. Essentially, it's comparable to the difference between a human conversation over the phone and a conversation in person. When a human is able to make eye contact, express body language, and gesticulate with his or her hands, it subtly — but never the less significantly — increases his or her power to communicate. This is why so many business people and salesmen still strive for one-on-one personal meetings, as opposed to exclusively relying on phone, fax, and email. It also explains silent movies and how tourists in foreign countries are able to communicate (kind of) even though they don't speak a word of the native language.

So, the computer is given a new element of communication and this can lead to two big steps forward in game complexity: One, the game player benefits from a more immersive (and assuming a leap of imagination) more realistic gaming experience — the game world can now be "touched," in addition to simply seen or heard, and racing games and flight sims benefit from realistic G-Forces in turns and maneuvers; Two, the computer no longer has to show everything to the player — it could, instead, put players in a pitch black cavern and have him navigate his way through simply by touch, or let him know that he's taken a bullet in the back, or communicate that his player is tired and that movement is progressively getting more and more difficult. The point is that all of a sudden, because the game designer is no longer limited to what can be shown on screen, there is huge potential for new game elements that were previously off limits because there was no effective way of communicating their existence to the gameplayer.

There's no reason why a skilled game designer shouldn't design a thoroughly compelling game in which there were little or no graphics at all. Sure, it wouldn't look terribly attractive from the screenshots on the box, but we all know better than to trust game packaging, don't we?



This force feedback joystick from CH Products, based on the Immersion technology, is already on the market

Want to respond?

We'll be including a "The Way Games Ought To Be" Q&A in future issues, so if you have any comments, criticisms, or questions, email Neil West at theway@mediageneration.com or write The Way Games Ought To Be, Next Generation, Imagine Publishing, 150 North Hill Drive, Brisbane, CA 94005. Email is of course our preferred method of communication.

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- 131** PlayStation
- 132** Saturn
- 134** PC
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- 144** Arcade

Next Generation's Star Guides provide a quick way to get our general impression of a game. But unless you read the review, you're only getting half the story. To get all the information you need to know before making a purchasing decision, read the whole review; don't stop at the stars

★★★★★ Revolutionary
Brilliantly conceived and flawlessly executed; a new high watermark.

★★★★ Excellent
A high quality and inventive new game. Either a step forward for an existing genre or a successful attempt at creating a new one.

★★ Good
A solid and competitive example of an established game style.

★★ Average
Perhaps competent — certainly uninspired.

*** Bad**
Crucially flawed in design or application.

 Denotes a review appearing on the Next Generation Disc.

 Denotes a review of a Japanese product.

Nintendo 64

A Race Won

Nintendo 64 finally gets a racing game worth keeping, and it's a doozy



The split screen uses small gameplay windows, but the frame rate and action are excellent

Multi Racing Championship

Publisher: Ocean
Developer: Imagineer/Genki

Nintendo 64 owners may have to put up with a lack of software in a number of genres (3D fighting games and RPGs, most notably), but at least they're getting plenty of racing games. Although *Cruisin' USA*, and, arguably, *Mario Kart*, were real disappointments, things are definitely improving.

Multi Racing Championship lands in the off-road sub-genre originated by *Sega Rally* in 1995. Since then, a flurry of so-so titles has come and gone (*Monster Trucks* and *Rally Cross* among them), but few been all that fun. MRC is not only fun, but the realism and physics model are so good, some Sega loyalists who don't own N64s have said crazy things like, "I'd buy an N64 just to play that game."

Using forked roads to split up each of the three courses are 10 selectable cars (two opened up by besting Match Race Mode), the game offers an impressive number of car and path choices. Snowy mountain paths, off-road dirt courses, bridges, cobblestone streets, and concrete city streets are among the many racing environments, and at least in the beginning, you won't know which is coming next. The fun comes in when players learn which car or truck they like, configure it (swapping bodies, shocks, aerodynamics, wheels, gears, transmission) to their liking, and then learn which paths to take and when. Players can race against the computer (Championship Mode), two top racers (Match Race Mode), Time Trials, or Versus (two-player mode).

As all this implies, there are probably more textures in this game than in any Nintendo 64 game yet, which creates



Multi Racing Championship: if only every N64 racing game were this much fun

a wonderful graphic complexity, and the backgrounds and cars themselves are quite detailed. To get this variety however, the game has to run in a low-res mode, which muddles the graphics a bit.

PlayStation's pioneering *Wipeout* seems to have set a musical trend that will continue to be followed, and MRC's techno soundtracks are no exception. The sound effects, however, are a mixed bag. Most are on par, with the exception of the continuous high-pitched whine of the engines, which sounds remarkably like a ferocious, drunken sewing machine, eventually becoming one of the most annoying sounds in videogame history.

MRC could've benefited by including at least one more course (which was also *Sega Rally*'s weakness), and better sound effects. But the two-player mode and mirror courses (opened up by beating all opponents in Match Race) cap off the game extremely well, and give it just enough legs to keep players coming back.

Rating: ★★★★

PlayStation

Thunder Truck Rally

Publisher: Psygnosis
Developer: Reflections

Thunder Truck Rally comes from Reflections via Psygnosis, the same combination that produced Destruction Derby 2. This certainly set up some high initial expectations — the thought of finally getting in a monster truck game that was actually good — but in the end, it left us wondering if it would ever be possible to successfully translate monster truck racing into a videogame.

The game has three modes of play, Endurance, Circuit, and Car Crushing. Endurance, the most ambitious of the three modes, allows players to race

anywhere on four large islands, which are streamed off the CD in real-time. An arrow in the lower right-hand corner of the screen serves as a guide, in a



Don't take too many jumps in Thunder Truck Rally — a near impossible task

similar fashion to Sega Rally and other "off-road" racing titles. However, while it's usually no problem guessing the correct course by seeing the upcoming turn, sometimes the correct line to follow through the curve veers wildly in an unexpected direction. Of course, the computer-controlled vehicles always know the right way to handle every turn. Funny that.

Each of the vehicles, which range from jacked-up trucks to jacked-up cars, sustains suspension damage if they hit too many big jumps. Trouble is, the game's physics model has the gravity turned way down, so it not only feels like you're driving on the moon, but vehicles end up flying over ridges and bumps and soaring dozens of feet in the

air, causing all sorts of damage to the shocks when they land.

While the Circuit mode is more traditional racing, hemmed in by walls, the Car Crushing mode will undoubtedly be the game's second biggest initial draw. However, this too is a disappointing No matter how much fun it looks on TV, driving back and forth over a row of parked cars just isn't that exciting.

With the exception of the aforementioned uncontrolled bouncing around, the control is as top-notch as you would expect from Reflections. In the end though, this wasn't what we'd have hoped for from the makers of Destruction Derby 2. Not horrible, but nothing special either.

Rating: ★★★

PlayStation

Complete Blast

Poy Poy

Publisher: Konami
Developer: Konami

Who would've thought it possible? For years, Bomberman was played in the **Real Generation** offices every day at five o'clock, come hell or last minute deadline. Now, a new multiplayer game has stalked into town to take its place — at least, for now — Konami's *Poy Poy*.

Up to four players compete in a debris-strewn arena, via the PlayStation's multi-map. The object: blow up or knock down your opponents enough times to kill them. This is accomplished by throwing the various items in the arena (rocks, logs, bomb) at opponents, throwing other objects at bombs in time to catch an opponent within the blast, or just picking up opponents directly and throwing them around.

There isn't too much strategy per se, but with a long, impressive list of special powers each

competitor can choose from before the match, and a few special items to grab during a match (or avoid, since there are some dangerous doodads mixed in with the good ones), the amount of entropy generated is enough to please even the most die-hard of chaos theorists. The play mechanics are solid, with each cartoonish character able to leap and roll sideways.

The circular arenas are quite small, and unlike Bomberman, are completely 3D. This makes aiming tougher, but ultimately more rewarding. In a nice touch, each battle area has its own theme, with environmental hazards to avoid. The Medi arena, for example, has Easter Island-like statues that march around biting players, while the

The new multi-player title from Konami makes a great party game

Robot arena has an evil R2-D2 clone shooting deadly energy beams every which way. These environmental hazards, along with having all the other players to contend with, make each game pretty hectic.

Perhaps most importantly however, *Poy Poy* has the one quality all truly great party games must have: gameplay is simple enough to grasp within a few minutes, but offers enough variety and depth to keep everyone wanting to play just one more time.

This is a truly great multiplayer game, and even offers the single player a great deal of fun.

Rating: ★★★★



Poy Poy is the best multiplayer game for the PlayStation, hands down



rating

Saturn

Shine On



Shining the Holy Ark's
graphics mix 2D sprites with
fully 3D backgrounds.
Although not as high-tech as
some, the results are detailed
and impressive

Sega's premier RPG series
makes the leap to 32-bit and
doesn't disappoint



Shining the Holy Ark

Publisher: Sega
Developer: Sega

The latest offering in Sega's popular Shining Force RPG series, *Shining the Holy Ark*, has finally emerged on a 32-bit platform. Departing from the strategy-intensive emphasis of *Shining Force 1* and *2* on Genesis, SHA instead returns to the corridor-based, first-person combat engine of the earliest installments in the series, *Shining in the Darkness*. Boasting some sharp, innovative graphics and interesting gameplay elements that haven't been widely used in traditional, turn-based RPGs, SHA truly shines.

The storyline is incredibly basic, but deep enough to keep up a solid, substantial pace. You're in control of a small group of mercenaries, bound together by a strange, supernatural twist of fate, and assigned the task of saving their land from the return of a race of demons. Sure, we've heard it all before, but the shift of emphasis in gameplay is evenly balanced between actual combat and character development. So, while players will spend the bulk of their time hacking and slashing through massive, multi-level dungeons, building levels in order to defeat some tough challenge bosses, the story scenes in between give these characters enough motivation to keep players moving forward to the next dungeon crawl. However, since there are no real sub-quests or secrets, the combat is where the true challenge of SHA lies.

One of the more interesting features of SHA is the use of sprites instead of polygons to construct the characters and towns. This gives SHA a high level of detail and a visual uniqueness that not only looks great during gameplay, but sets the title apart from the bulk of other recent games in the genre. Another novel element is the inclusion of a "peel pre-battle system," which allows the player to collect and use different classes of peels to enhance combat abilities. The acquisition of peels adds

depth to SHA, which is fortunate because the actual scope of the game is fairly small. The world of SHA consists of only four real towns in which to interact with citizens and purchase items. And with only one real sub-quest to deter you from the main storyline, the game can seem somewhat restrictive. These factors feel incredibly limiting in a game whose genre emphasizes the importance of character interaction to help progress gameplay. But then again, the mazes and dungeons are where the real focus of game is centered, and with all of the other impressive elements of SHA strengthening its appeal, Saturn owners and RPG fans will find this a solid game to treasure.

Rating: ★★★★



Although the number of towns to explore is minimal, there is a lot to do in each

D-Xhird

Publisher: Takara
Developer: Takara

Takara's been going downhill ever since *Toshoinden* came out. If D-Xhird is the best it could do for a Saturn-specific game, then Takara should hire some better designers.

If Namco's *Soul Edge* is a Lexus, then D-Xhird is a Hyundai. Not a lot of miles, but it gets the job done. Barely. It's a weapon-based 3D fighter, with a decent, Gouraud-shaded 3D engine, and a workable frame rate. Actually, the game looks really good — as long as it isn't moving. Once the "action" begins, players will notice that Takara has learned nothing from the horrid *Toshoinden* UVA Animation is dirt poor and the characters move like an old stop-motion film.

Combat is every bit as subpar as the graphics. Compared to the depth of *Virtua Fighter 2* or *Fighting Vipers'* moves, D-Xhird's combat system is pitiful. Each character has a maximum of 30 or 40 moves, and the slow response time makes for some frustrating gameplay in the heat of



D-Xhird is the best-looking Takara game yet — until seen in action

battle. The range of tactics is limited and the combos unbalanced.

Why Takara chose to rehash *Toshoinden* is a question best left unanswered. Players should stick to the infinitely better fighter's *Megami*. Rating: ★★

Macross: Do You Remember Love?

Publisher: Bandai
Developer: Banpresto

You would think the company that invented the all-but-invisible *Tamagotchi* could make a decent licensed game, but you'd be wrong. The industry doesn't call Bandai "the Asylum of the East" for nothing. All too predictably, Bandai celebrates the 15th anniversary of the *Macross* anime (that's the 1st third of *Robotech* for western folk), with an average game that could've been much more.

Based on the apocalyptic 1984 motion picture, *Macross: Do You*

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5PSE7

rating**Saturn**

The missile attacks have been done right, but the rest of Macrosoft is pretty bland

Remember *Love*, the game wraps a 2D side scroller around the story to mixed effect. As the hero, players get to fly the typical *Macross* fighter, a transformable jet that has different targeting options and flight properties in each mode. Shades of *AeroBots*, perhaps, but different levels of depth and guided missiles are uniquely suited to the Macrossphere, and put to good use.

Take away the new gimmicks, though, and all that's left is a clean but standard shooter. *Macrospace* has obviously designed the game with the Saturn in mind, but the low sprite quality leaves much to be desired.

Gameplay also feels forced, more often than not. By sticking so closely to the movie's storyline, the developers make the player endure several non-levels before getting into the real action. It's also possible to predict the next level and what sort of action to expect if the player's watched the movie more than once, which is pure laziness on the designer's part.

Out of the two *Macross*/Robotech games currently released, *Macross* *alpha* is more enjoyable, but the emperor wears no clothes. Unless players look at it through nostalgic-colored glasses, this game is worth a mention, but not full price.

Rating: ★★

Quo Vadis 2

Publisher: Glams
Developer: Glams

In the real-time game arena, it has traditionally been the West which leads and the Japanese that follow. Glams' break that tradition with *Quo Vadis 2*, a game with real advances in the real-time combat game.

For this squad-level game, Glams has taken the best features of past games and done them one better. Players can set complex navigation paths with multiple waypoints, something which no other game, including *Warcraft II*, has managed to do. Individual abilities and morale affect



Sparse graphics belie the depth of Quo Vadis 2, which does things no US title does

each squad member's combat strength, while customizable mecha will fire weapons according to range, much as in Blizzard's forthcoming *StarCraft*.

Each of these features is handled effortlessly by the game's engine, controlled through a simple, four-command interface with missions tied closely to a well-choreographed storyline. *Quo Vadis* becomes an open RPG strategy game, similar to *Dragon Force*, which nearly breaks free of the traditional confines of traditional Japanese RPGs.

Unfortunately it would have been better if the production level were as good as the strategy aside from the elaborate cut scenes and video chatter; the graphics are almost amateurish, executed static screens and non-animated sprites. For hard-core strategy gamers this won't be a problem, but the casual gamer is likely to drop it in favor of something with more eye candy.

Glams may not have created the next big game, but Western designers should watch their backs when it turns its attention to *Quo Vadis*.
Rating: ★★★★

Sega Ages

Publisher: Working Designs
Developer: AM2

The first thing players will notice when playing *Sega Ages* is that AM2 designers were amazing, even back in the late '80s. This Trilogy of Space-Harrier, *Afterburner* 2, and *Ouroboros* demonstration



Afterburner is still more fun than a barrel of heatseekers

that gameplay is timeless, even if graphics are not.

Afterburner and *Space Harrier* are still the quintessential forward-scrolling shooters, clearly influencing later games, most obviously the *Panzer Dragoon* series and *sky Target*. Although not the deepest or even most satisfying of shooters, AM2 understood that shooters were designed to make the player look good. The timing and graphic design of each level are still imaginative by today's standards.

Ouroboros, on the other hand, has aged badly, but is still a commendable play, much like a worn teddy bear. The graphics are primitive, even ugly by today's standards, but the smooth control and branching paths were signs of good things to come from AM2.

Overall, *Sega Ages* holds up better than the Namco Museum series, and at a mere \$40, these three games should be worth giving the CD a spin.

Rating: ★★★

Soukyu Gurentai

Publisher: EA Japan
Developer: EA Japan

Like the 2D fighters, the 3D shooter has long since reached the flat part of the advancement curve. In time, game evolution may push the genre out of existence, but until then, at this late date, technology doesn't steer the genre, design does. Looked at this way,



Crisp control and fine graphics make Soukyu Gurentai a cut above the average shooter

Soukyu Gurentai (*Blue Sky, Crimson Warrio*) is at the top of its class.

There are four pillars of shooter design: level layout, graphic detail, firepower, and control. *Soukyu Gurentai* excels at all of them. From the first level's polygonal city to the orbital assault, the stunning scenery and pacing build a sense of drama without shoehorning it into a plot.

The active targeting system and incremental power-up scheme give players a lot of choices. SG has some of the tightest response ever seen in a shooter, thanks to its analog control.

Unfortunately, it's still a shooter, which means linear gameplay and pattern memorization. Good, mindless fun, but not much else. For Saturn owners who lament Raystorm's absence, *Soukyu Gurentai* is a great, possibly even better, alternative.
Rating: ★★★

PC**Blood**

Publisher: GT Interactive
Developer: Monolith

After the relative lack of quality of the last year's wave of *Zoan* clones, the quality of Duke Nukem offspring is actually kind of refreshing. Instead of *Rez* and *The Third and Dark Forces*, the Duke Nukem build engine has brought us *Redneck Rampage*, *Shadow Warrior*, and, perhaps best of all, *Blood*.

Blood takes everything about Duke and makes it more detailed, more funny, and more (where's bloody). The level design is much more creative, and while the majority of levels are still of the "find the key, find the other key, use both of the keys, exit the level" variety, there is enough creativity shrewdly shown about them to make gameplay more fun than formulaic. The humor in the game is much more over-the-top than in Duke, with many of the player's one-liners taken directly from sci-fi and horror

films (i.e. *Army of Darkness*), spicing up the sometimes-long levels.

The weapons are the most inventive of any 3D shooter out there. In addition to the ESRB standard issue shotgun, there is a flare gun (flares explode after setting in the chests of enemies), a skull-headed staff called the "Life Leach," which steals an enemy's health and gives it to the player, and weirdest of all, a voodoo



Blood harnesses the Duke Nukem engine for a game that's a hell of a lot of fun

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PC

It Shreds

Carmageddon

Publisher: Interplay

Developer: Stainless Software

"Death Race 2000 with polygons" sounds mighty good to us, and it makes a great game too

Any game that rewards the player for creative methods of vehicular manslaughter is bound to turn a few heads. In the case of Carmageddon, those heads should stay turned, because a hell of a good game lurks beneath the ultra-violent exterior.

The game (distributed through Interplay) should be called Quentin Tarantino Presents:

Destruction Derby: There are three ways to win each of the 30 plus races. The first, and least fun, is to finish the race in first place. The second, and most fun, is to destroy the other five contestants in the race. The third, which was too daunting to attempt, was to run down all of the pedestrians on the course. Since there are frequently more than 500 bystanders on a given track, this is not the sort of objective one can achieve quickly.

Rainbow Six: This game so blatantly condones wanton slaughter. Running down each unlucky target results in gaining bonus credits, which are then used to upgrade the vehicle's armor, offensive capabilities, and engine. The game begins with the player ranked number 99 in an unknown racing circuit, with each victory (by any means available) resulting in an increase of three or four ranks.

The game runs smoothly on a Pentium 130 with all detail levels set to normal, with very little draw-in noticeable in the backgrounds. Even with all six cars and numerous pedestrians on the screen at once, the game still runs at full speed — at 320x200 under Win95, 640x480 under DOS. By the time you read this, however, there should be a 30th patch available on Interplay's Web site.

Obviously, this game is not for the squeamish.



If it was any more real — or gory — you'd need therapy after playing.

— the detail on exploding pedestrians is, well, kind of disturbing at times. But if you're willing to sweep your morals under the rug for a while, and shamelessly commit auto-homicide on a grand scale, then Carmageddon is an absolute blast.

Rating: ★★★★



Well, there are 13 weapons in all, making a highly entertaining romp through the included four episodes, setting zombies on fire and blowing up one-eyed monies. The game is lengthy without being too tedious, and challenging without being too difficult. All in all, a worthy use of the 3D Reelms' build engine.

Rating: ★★★★

Comanche 3
Publisher: Novologic
Developer: Novologic

As military helicopter flight-sims go, Comanche 3 heralds a new era with its use of Voxel 2 technology graphics. The technology, which renders terrain with tiny "volume pixels" rather than polygons, creates a nifty textured

environment without any of the high-resolution problems experienced previously in the series.

The downside of these realistic battlefields is that the memory requirement of moving all those voxels around is quite high, so the mission maps end up small by today's standards. These small combat areas can leave the player feeling as if every mission is just a matter of following the way-points, with groups of enemies littered along the route for the player to shoot. Still, a nice selection of missions on offering terrains, ranging from desert, to forested hills, to snow-covered landscapes, helps add variety, as do some interesting options, like the ability to call in additional air support or artillery fire. The addition of a computer-controlled wingman also adds an new wrinkle to the series.

In terms of actual flight control and game interaction, whether the player is a hard-core flight-sim player or a more casual action-oriented fan adds all the difference to how much they enjoy the game. Thanks to VSTAB (versical stabilizer), Comanche 3 makes



Voxel 2 tech graphics give Comanche 3 a distinct visual advantage over its competitors.

it easy for the novice pilot to step in and navigate close to the terrain quite comfortably. Whether this feature is realistic is a matter of some debate. Novologic insists that it has accurately recreated the flight model of an actual Comanche helicopter, while critics insist heli-copters aren't that easy to fly.

Still, the game captures the feeling of helicopter flight nicely, and for the purists, the advanced flight mode allows the player to turn off the VSTAB.

One can also complain about the game's spotty enemy and wingman computer AI, but overall Comanche 3 is a great-looking game that emphasizes fun and entertainment at the cost of some realism. The result is a title that gamers will love, although hardcore flight-sim freaks may have some things to grumble about.

Rating: ★★★

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Imperium Galactica

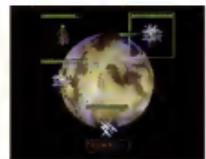
Publisher: GT Interactive
Software
Developer: Digital City

Rather than settle for just another strategy game, the designers of *Imperium Galactica* went one better and created a game that challenges not only a player's skill in combat, but leadership skills as well. Interaction with other characters within the game can have a profound effect on the game's events.

Players begin as a low-ranking Lieutenant, but as the game progresses they move up through the ranks. Early on, gameplay centers around colony management (where income is generated) and space combat. Battles occur whenever a colony is invaded or hostile ships come into contact with one another, and combat is carried out in a manner very similar in style to Warcraft, with the ability to issue orders to single units as well as groups. Fighting will only



The bar is a good place to talk to other crew members in *Imperium Galactica*. Sometimes the information is useless, but every now and then it can be extremely helpful.



In *Into the Void* colonies are key, and if you don't defend them, you'll certainly lose them.

try to establish colonies as well, and there are a number of means at your disposal to prevent them from getting ahead. A few of these are mildly unique, such as using diplomatic relations to play enemies against each other, or the more covert route of sending special agents on reconnaissance, theft, or sabotage missions. Sometimes the best strategy is to simply steal technology.

For those who prefer the more direct route and develop battle cruisers, even here *Into the Void* manages an interesting wrinkle, in that the game doesn't have any predetermined ship configurations; rather, players design the ships themselves by first choosing a base hull, then adding engines, weapons, and defensive items. This is a very nice feature, since it allows the fleet to be customized for specific missions.

While it doesn't break a whole lot of new ground, *Into the Void* is a solid enough game that should please most.

Rating: ★★★

Realms of Arkania III: Shadows Over Riva

Developer: Attic Software

Publisher: Sir-Tech Software

The third and final chapter of the *Realms of Arkania* trilogy from Sir-Tech is exactly what we all expected it to be — a deep, detailed, and strategically heavy role-playing game. Indeed, it even uses the same engine that made *Realms of Arkania II: Star Trail* so popular.

The entire *Realms of Arkania* series is based on the German role-playing system *Das Schwarze Auge*, or The Black Eye. The system is complex, and there are enough stats to please just about any hard-core RPG gamer.

The only real drawback *Five* comes over from *Star Trail* is that the interface just isn't very well thought out, especially when it comes to the turn-based combat. All your characters fight it out on a grid, and while the isometric view of the battlefield lets you know how things stand, when the characters start to get bunched up it's far too easy to lose track

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rating

PC

Damned Good

Dungeon Keeper

Developer: Bullfrog

Publisher: Electronic Arts

Peter Molyneux originated the "god sim" with *Populous* several years ago. Since that time he has been involved in a number of projects in which players get to manipulate every facet of some world while happy (or unhappy) minors react to players' decisions. So why is it that when he releases yet another game in the genre, it still manages to capture the imagination, and even more importantly, seems completely fresh? The answer is in attention to detail and visionary concepts of gameplay.

Starting with the extremely original premise of making the player the bad guy, the game gives players a chance to create a dungeon fraught with traps, monsters, and other perils to destroy any would-be heroes who happen along. At your disposal are a number of tools and controls that allow you to create new rooms, mine gold, create monster lairs, training facilities, evil temples, torture chambers, and voids more. The associations between the monsters you attract and the quality of your dungeon are astounding. Orcs will only take up residence if you have a suitable training room, while wizards will shun you unless you have a large enough library for them to study in. A special nod is reserved here for the Dark Masters, jerky fighters who actually enjoy being disciplined and hang around the torture chambers cackling gleefully while uncooped.

In addition to the omnipotent overhead view, there is also the ability to possess any creature and control it from a first-person perspective. You may choose to be an imp for a while, mining away and toiling at the maintenance of your dungeon. You may decide to become one of your vampires, attacking the unwary heroes as they enter your domain. Either

Peter Molyneux's last project for Bullfrog has been a long time coming, and it was worth the wait



Peter Molyneux's last title for Bullfrog is among his best titles ever

way, the option is somewhat unique among strategy titles, and it adds a neat twist.

While the game will run in low resolution on as little as a Pentium 75, for the highest modes at least a Pentium 166 should be used. Graphically the game is extremely pretty, employing excellent light-sourcing and the ability to zoom in on the action for a close look at the detailed creatures.

The audio samples used for each of the creatures and spells show the traditional sense of humor and style that have become so typical of Bullfrog titles. Music is also suitably dark and edgy, a mix of traditional medieval themes with a hard guitar sound.



The gameplay is among the most addictive to hit the market in the last several months. Players can immediately grasp the simple interface and take the time to learn the complex relationships between their designs and their success (or failure).

The game's only downside is the occasionally weak AI employed by the computer. While your units generally obey your commands and act well enough on their own, CPU opponents rarely display the same level of intelligence. However, the game does support multiplayer matches over a LAN (internet is not supported, although a TCP/IP patch is rumored to be in the works), which is a big plus.

All things considered though, the AI flaws aren't enough to overshadow what is ultimately a brilliantly executed game. We can only look forward to whatever new title Molyneux is working on in his new company, Lion Head.

Rating: ★★★★☆



Gameplay can be thought of as an RPG as seen from the other side: breeding masters and laying traps for unwary heroes

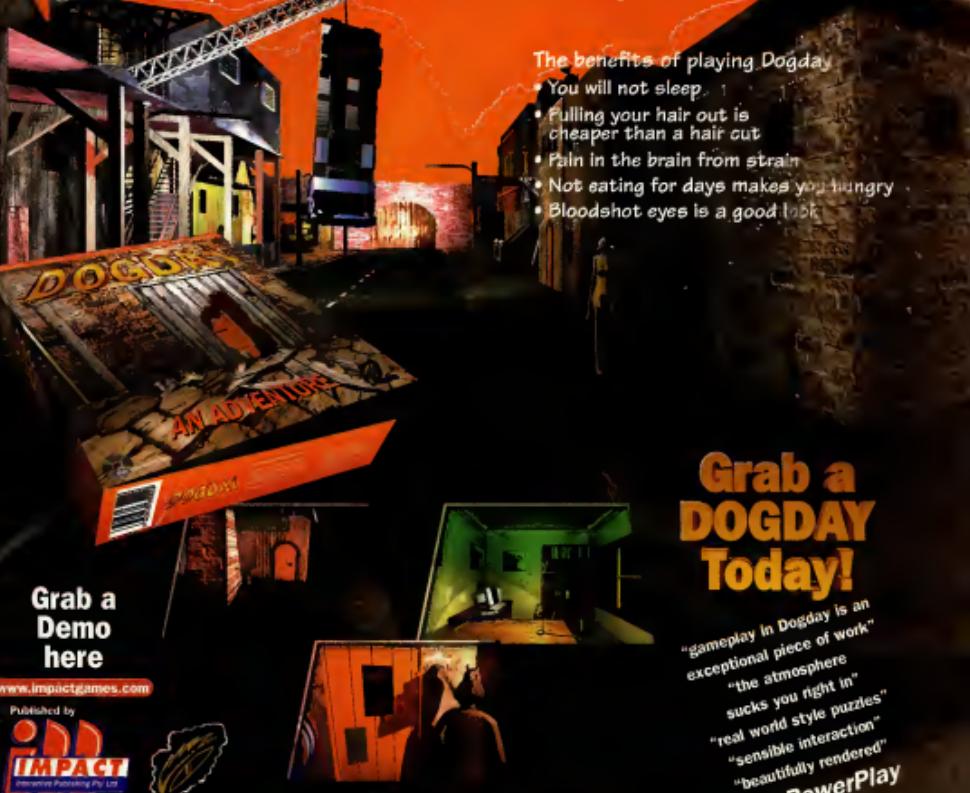
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Pandemonium 2



LIBIDO

PC



The improvement of the 3D graphics in the first-person view is the most noticeable change from *Star Trail in Shadows over Riva*.

of where they are among all the bodies. You can let the computer figure out the combat results for you in a few seconds, but part of the fun is figuring out strategies to destroy enemy groups, so the lack of improvement with regard to combat is disappointing.

In fact, while overall *Riva* does improve on a few aspects of *Star Trail*, it doesn't do much to upgrade either gameplay or graphics. Most of the graphics remain pretty much the same in resolution and design, except for the prettier 3D model window. Even the character portraits were lifted from the older game.

Luckily, the story line makes the whole thing worth playing, and there's enough variety in the NPCs you encounter and items you find to make up for a few visual shortcomings. Role-playing gamers will definitely be able to sink their teeth into this one.

Rating: ★★★★

Sentient
Developer: Psygnosis
Publisher: Psygnosis

Although ambitious in its attempt to create a large, interactive world filled with intelligent non-player characters and completely open-ended subplots and storyline twists, *Sentient* falls flat on its face. The game is also available for PlayStation, where it stood out among the relative lack of graphic adventures for the platform. The PC version, however, makes its shortcomings all the more apparent.

The interface is clumsy to the extreme — to move simple conversations, you must wade through at least three layers of phases; sure, it makes for incredible amounts of variety when it comes to carrying on a conversation, but if they're going to



If you think this *Sentient* screenshot doesn't look very good, you should see the game.

make the dialog system so complex, why not add a text parser so you can type exactly what you want to say?

The graphics look awful unless you've got a 3D Blazer or Metrox Mytique. Most of the puzzles seem to center on getting an object from one person and giving it to another. Of course, you can't discount the maze puzzles, either.

All in all, the execution makes the whole thing a complete waste of time. It's big, it's ugly, and it's as frustrating as hell to work with. In other words, it's about as entertaining as getting Chris Farley to dance a tango. Unless you have enough reverence to wear down granite, don't bother with this one.

Rating: ★★



Except for some puzzles like this annoying button-pushing affair, *The Space Bar* is a treat.

The Space Bar
Developer: Booff Games
Publisher: Rocket Science Games

Steve Meretzky, creator of *Planetfall*, *Zork Zero*, and *Astchiller's Guide to the Galaxy*, has struck again. *The Space Bar* has everything you'd expect from a Steve Meretzky game — strange characters, twisted humor, and a deep story line. You're a human cop searching for a murderer in an intergalactic bar, but you have powers that allow you to go back into some alien's memories. These mind links form mini-quests which take place within each alien's mind, enabling you to gain insights about the alien, with the goal of uncovering the murderer.

It's a fascinating concept, and is rather brilliantly executed. However, the engine that runs the game has its flaws. Although the 360-degree panoramic engine is pretty clever (reminiscent of *Zork Nemesis*), it keeps most of the game world from being truly interactive. That's fairly normal in many adventure games, but there are so many objects that look like they should be interactive and aren't, that it becomes frustrating.

Some puzzles also really need work. Surprisingly, there was even a dreaded push-button puzzle that required endless hours of clicking before it was solved.

However, *The Space Bar* has enough inventiveness, and the bad puzzles are few enough, that it's an enjoyable game — especially with the tongue-in-cheek humor scattered throughout. If you're a fan of Steve Meretzky, you might be slightly disappointed, but not by much.

Rating: ★★★★

WipeOut XL
Developer: Reflections
Publisher: Psygnosis

When *WipeOut XL* came out on PlayStation, few people had quibbles about the game, given its leap in graphics and audio, and more frigging games than the original title in the series. Psygnosis has almost one-upped itself with the latest PC version, adding hardware accelerator support while maintaining excellent control.

The Dual3DO version, in conjunction with a 3D accelerator or even a Rendition board, provides beautifully clean textures and minimal pop-up at 640 x 480. PowerVR takes this one step further with a fog layer in the distance to completely mask pop-up, minor light-scouring, and support of resolutions as high as 1024x768. Seeing

these bonus levels take you to funky-ass new places.



rating

this title runs at such a resolution with texture filtering, transparency, and mipmapping, at a more than reasonable frame rate, is nothing short of amazing. Players still have a choice of four basic ships, with additional hidden ships becoming available after completion of all courses and classes. Unlike the original, collisions with the wall do not necessarily result in a dead stop, but instead merely slow the player down slightly. Also new to XL is the ability to actually destroy your opponents with weapons. Players must keep track of their own shield energy levels and take a spin through one repair area as needed between laps.

The computer AI provides more than a suitable level of challenge, and players will quite often find themselves having to worry about their own shield

levels as a result. Track design is well done with numerous scenic elements (trams moving, lens flares, etc.) contributing greatly to the overall environmental feel.

We would be greatly remiss not to mention the amazing soundtrack, provided by Psygnosis's own Cold Fusion. While some of the music tracks are remixes of the original WipeOut soundtracks, many new ones will keep your adrenaline pumping, and once again hits a high-water mark in both music and production design.

If you have a 3D accelerator of any sort, you owe it to yourself to pick up this game. It's nearly flawless gameplay, pumping soundtrack, and visual excellence mark it as a showcase title and all around good time.

Rating: **★★★★**



Wipeout XL for PC is one of the best reasons to buy a 3D accelerator — an amazing version of a top-notch game

Mac**Duke Nukem 3D**
Publisher: MacSoft
Developer: 3D Realmz

Though it took a year, the Mac port of Duke Nukem 3D is an impressive feat, both for the game's own features, and the quality of the port.

Cyber's build engine is still a "two-and-a-half-D" construct, as was Marathon's, but the build is more sophisticated, able to place rooms over rooms, lake bridges and the like. Characters and items are sprites, and have a pixelated appearance, but thanks to good game design this detracts little from play. To MacSoft's credit, Mac interface cues such as dialog boxes are included. Not to mention that on a mid-range PowerMac, we got a decent 24 fps frame rate at 640x480 resolution, with all the details and sound on. In addition, the networking features are amazing; over null modem or LAN, and it's all cross-platform, to boot.

The Mac version includes not only all the bonus levels known as the Platinum Pack on the PC, but uses the Mac's own sound recording features to enable live trash talk between players over a net game. Now, who wants some?

Rating: **★★★★**



Duke Nukem for the Mac is every bit as good a time as its PC ancestor; a welcome port

Heroes of Might and Magic II

Publisher: Studio 3DO
Developer: New World Computing

The first Heroes of Might and Magic looked good, but was problematic. The quality of the Mac port was poor and annoyingly crash-prone. Heroes of Might and Magic II proves to be much more stable, despite some porting blunders.

Gameplay is similar to the original, with a few enhancements. The resource-management, turn-based nature of the game is unchanged, as is the goal of taking over all the other castles on the gameboard and eliminating the other heroes. New additions are more hero and monster types, more varied castles, and an improved computer AI. Battle mechanics are changed, too; now heroes have a depleting number of spell points, and there's an amusing "apple of death." It would have been nice, however, if HM&M had used standard dialogs for saving and opening games. Still, as role-playing games go, not on the Mac, HM&M, with its mix of character and Warcraft-like game elements is a welcome addition.

Rating: **★★★**



Using the environment is key during the battles in Heroes of Might and Magic II

Arcade**Last Bronx**

Publisher: Sega
Developer: Sega AM3

The mysterious disappearance of one of Sega's coolest and most street savvy fighters has just been solved. Well, sort of. After showing a 75% complete version not less than a year ago, Sega has failed to make any mention of the game since. What happened to this fabulous weapon-based brawler? As it turns out, Last Bronx seems to have been the victim of Virtua Fighter 3's, a casualty of progression that found itself in the unavoidable position of being the last Model 2 fighter — ever — lost in the shadow of its Model 3 cousin. Last Bronx was passed over before it even started to ship to arcades.

Which is a shame, because like many AM3 titles, Last Bronx is a gem, and in some ways more innovative product than the sometimes overly smooth efforts of AM2. This is Sega's entry in the weapon-based fighter, revolving around street punks and bandos who look like they're straight out of Escape from New York or The Warriors.

Carrying bats, nunchucks, long poles, tonfin police sticks, Sais, and Sansotsukun, rival gang members mix weapon-based combat with street brawling and martial arts techniques in ways that are far more subtle and crafty than at first glance. The same simple three-button configuration (punch, lock, block) found on all Model 2 fighting games is used on Last Bronx, and is still the most natural, intuitive, and easy to learn system around, so having some experience with VF moves helps when learning the combat system.

However, all eight characters (Bluelu, Nag, Jannaku, Isa, Kurokura, Yoko, Tommy, and Joe) are different in the way they fight, and the unique abilities of each are guided by a helpful system.

There are three different get-up moves (tumble and rise, rise and kick, and turn and rise), as well as a Quick Approach, and an Attack Cancel, meant to disarm your opponent's defensive strategy.

Sure, anyone can button mash and survive the first couple of matches, but unlike Fighting Vipers, for example, that's about as far as one can go. After that, long pole expert Tommy will flip you upside down in the blink of an eye, or Yoko will start into a combo with her tonfin that knocks you into a triple flip 1/4 of the way across the screen.

Character movement is fluid and glitch-free, and the overall attention to detail, whether it's the spin on Joe's nunchucks, or the swing of Zamoku's giant hammer, is impeccable. Virtua Fighter 2 looks primitive in comparison, and although Last Bronx still doesn't compare to VF3, well, nothing does.

The sound effects are excellent, especially the crack of a bat on an opponent's head, and the characters taunt verbally on occasion, too. The music is OK. It's not really noticeable, but it doesn't distract or get in the way either.

Last Bronx is already in development for Saturn, so at least some folks will get to play it. Let's hope then it gets the attention it deserves.

Rating: **★★★★**



Last Bronx is grittier than VF 2. It's sad that AM3's games are always in the shadow of AM2



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rating

PC

Super Model

Sega Super GT

Publisher: Sega

Developer: Sega AM2

AM2 and Model 3 demonstrate once again why they're the best in the business



Without question, the most visually stunning racing game of all time, *Sega Super GT* is absolutely the state of the art in arcade racing.



Le's get right down to it. Sega's newest Model 3 creation is the most gorgeous driving game ever to grace an arcade. Simply put, *Sega Super GT* is a visual masterpiece, boasting never-before-seen graphics and providing realistic driving speeds gamers simply have never experienced. Of course, they're Mario Andretti. After the brilliance of *Virtua Fighter 3*, *Sega Super GT*'s a superb Model 3 follow-up, harboring only a few minor hitches, most of which are contained in the game's controls.

Each level is filled to the brim with eye-popping polygonal environments and moving backgrounds, the most stunning of which (indeed, even boastful) is the aquarium, found on the first and easiest course. Other courses feature full mountain ranges containing multiple waterfalls, Aztec ruins, and airplane hangars, to name a few. The texture maps never cease to amaze, with seemingly no end to their variety. Water and glass transparency lens flare, reflections from water and the cars themselves, and fiery sparks bursting from a collision are all impressive.

Since this is a driving game, one would think less time would be spent looking at the scenery, but frankly it's hard to not. And maybe that's why many gamers will get up from this game and feel completely blown away, yet somehow unsatisfied. Sega's racing games

are becoming more and more realistic in look and feel, and in the way they must be driven. In other words, while there is more margin of error here than in *Sega Touring Car*, it is more difficult to master than *PlayStation USA* or *Indy Racing*. The other trick to master the power-slide, and while these have been a Sega racing staple since *PlayStation USA*, at such realistically high speeds, power-slides are difficult to handle, and multi-car wipeouts and flips are common.

This means a steep learning curve, but at least the computer controlled cars wipe out too. Up to two players can race at one time, a far stretch from the days of eight-person *PlayStation racing* (and probably due to the high cost of a Model 3 cabinet, rather than technical considerations), but the two-player mode is where the real beauty of the game lies. The four dream cars (*Porsche 911*, *Ferrari F40*, *Dodge Viper*, and the *McLaren P1*) are idyllic to drive,

though they differ from one another a little less than we had hoped for. The music and sound effects are superb, and the arcade cabinets are classy and well designed "just see to believe."

Rating: ★★★★



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Letters

Complaints, criticisms, comments: Correspondence between you and us

I enjoyed your "Know the Score" article in **NG 30**. In my opinion it was very fair and objectively written. But one point that was left out about the PlayStation that no other system (except PC) has, is the link capability. And now that PlayStation has dropped to \$149, I can buy another one and have what I've always dreamed of: my own home arcade. Eventually, with two TVs (32" screen WipeOut, anyone?) and two surround sound units, I will have a game system that blows away any arcade. If Sony was smart, they would drop the price even lower to entice PS-X gamers to do just that. Considering the entertainment value that link mode offers, it's worth it.

Greg Variotta
GVARLOTTA@AOL.COM

Sorry to say, but most Sony developers these days are giving

up on the Link Cable. Although your enthusiasm is admirable, it turns out that many consumers, believe it or not, actually can't afford the two TVs, two surround-sound stereo setups, and two PlayStations (not to mention two copies of each game). Most retailers won't even carry Link Cables anymore.

OK, what does a body have to do to get a straight answer around here? For months I've written, called and e-mailed everyone I could think of to either confirm or deny the rumors of a modem due to be released for the Sony PlayStation in September at or about \$99. No one has been able to tell me one bloody thing about it. With Sega's NetLink offering modem play to Saturn owners, why hasn't Sony come up with a NetLink of their own? With all the games that Sony offers

(especially those with a link feature), we PS-X owners deserve the right to be able to play online against one another. If it turns out that the rumors are not true, I for one believe that Sony is missing out on a great opportunity here. I hope you Sony guys are listening. Break down for once and give us what we all crave, online gaming for the PlayStation!

Emmanuel Vazquez
emmanuel_vazquez@bakerbo
tts.com

Although your passion is notable, it's also — sadly — misplaced. Although Sony had plans for a modem peripheral at one time, its market research showed such a system would be too expensive to launch, and would have a very limited audience (see the above letter about the Link Cable). Sources within Sony have stated unequivocally that, "Sony has no Internet strategy at this time." Sorry, Way back in **NG 06**, PlayStation creator Ken Kutaragi alluded to a modem for PlayStation 2, but don't bring your breath.

To bring up an old subject I'd like to talk about the voice acting in video games, particularly in *Resident Evil*. From my understanding of the game, Capcom wanted to bring the feeling of a horror B-movie into a video game, because, let's face it, B-movies are the best kind. One of the basic characteristics of such movies is when there's one thing about it that seems really, supply out of place — most commonly the acting. And that's what made *Resident Evil* so cool. Much of the game is awesome, but the acting gives it that off-kilter touch that makes it better than great, a classic in fact. How often have we laughed at "the master of

unlocking," or "Here, I got a rope, why don't you go down by yourself and check it out?" And, "Is that you Christ?" when standing right in front of her is a classic.

I hope there's a default setting for this kind of cheesy stuff in the second ones. Just something to think about:

ROHINTAO@aol.com

If more of the voice acting — or just acting in general — in video and computer games were actually good, instead of being terrible as a rule, maybe we could chuckle at the gaffes. Trouble is, most games are awful in this area. *Resident Evil* is a particularly grating example because the game's quality was otherwise so high. It's doubtful Capcom intended for the dialog to be so bad. If you liked it though, well, more power to you.

A couple of days ago I went to buy *Turok: Dinosaur Hunter* for Nintendo 64. When I got to Electronics Boutique and saw that it cost \$79.99, not including tax, I was shocked. That is ridiculously high. I decided to buy a PlayStation game instead for \$49.99, \$30 less. I'd like to know if the prices of their games will be this high all the time. I think Nintendo 64 is a great system, but the game prices are unreasonable.

Brian
DukeNukem14@juno.com

This is just one of dozens of letters we've received on the subject. In point of fact, both sales and rental charts are dominated by N64 titles, something which Nintendo is only too happy to point out as "proof" that S64 is just fine with consumers. Granted, those numbers may be somewhat deceptive, since the figures for Nintendo 64 carts are



Alias, the Link Cable. Did Sony ever expect it to succeed, or did they intend for it to be the "R.O.B. the Robot" of the Next Generation?

corresponding

concentrated in a very small number of titles per month, whereas PlayStation purchases are spread out over a much larger number of releases (not to mention a huge library of older titles NG doesn't have). Numbers to confirm or deny this vary greatly, but at the end, it's clear that however much consumers dislike the price point, they seem to be gritting their collective teeth and bearing it. Go figure.

In response to the star-rating system, I'd say it's really needed with the flood of software out in the market today. The star ratings were one of the very reasons I started to subscribe to **Next Generation**. What ever happened to the Gamer's Guide in the back of the issue by the way? It was very helpful!

Kennycapp@aol.com

Thanks for the input. At least for the foreseeable future, the star ratings will stay. Sorry about the disappearance of the Gamer's Guide from the print magazine, but since the **Next Generation** CD-ROM now includes a comprehensive database of every review ever printed in **Next Generation** (including PC, Mac, and arcade reviews which were never included in the Gamer's Guide), it was felt that those couple of pages could be put to better use with the return of "The Way Games Ought to Be."

Why is it that **Next Generation** magazine only reviews some games that were reviewed on the Web site? Games get reviewed online the day they come out, but then you guys leave out the review in the magazine.

And if it is put in the magazine you only review it for one system, which is confusing to say the least, because a gamer doesn't know if the rating stands for the other system(s). A suggestion is if the rating stands for all systems name all the systems, or put "multi."

Ruben Cito



Turok is fun enough, but \$30 more fun than a top PlayStation title? To many, the answer seems to be "yes."

Generation has to deal with a small limitation (read: imitation) known as "lead time," or the time it takes after a story is written for it to pass through art, production, printing, and distribution. Given NG's commitment to quality in both design and printing, this takes roughly two months to ten weeks. So, while NG Online can review a game the day it ships, **Next Generation** magazine can seem to lag behind. Of course, we are sent copies of games in advance of the general public, but our iron-clad policy is never to review a game until a publisher considers it final and renewable, so a lot of the time "in advance" only means a matter of a week or two before it hits store shelves (an especially acute problem, by the way, with cart-based, N64 titles).

As for games released across multiple platforms, if a game is available for a system other than the one on which it was reviewed, this is generally noted in the body of the review. Unless other versions are markedly different in content or quality, or the release dates for different versions are significantly far apart, we feel the space can be better utilized by covering new titles, rather than by repeating ourselves.

Your suggestion of a more formal system for noting other versions has merit, however. NG staffers are currently looking at several ways to increase the utility of the Finals section, and should implement them a few issues from now. Further suggestions are, as always, appreciated.

I was just reading NG 31, and on page 27 (the news story "Intel and Microsoft Enter The Arcade Fray") I found some of the article was missing. The very last sentence ends, "provide the horsepower to..." To what? Where's the rest of the article? I want to know the rest of it! Please tell me.

Brian Lau
Jaguar@whoever.com

Busted. In the rush to ensure a timely issue at E3, the news section suffered a bit. The final paragraph should have read, "With the advent of Intel and Microsoft's vision, the arcade industry is at a crossroads; it must decide whether to pursue the older, expensive, proprietary hardware or some new, open standard that may not necessarily have the horsepower to differentiate itself from home platforms." Five words missing. Sorry. To make it up to you we'll

I just reread the Trip Hawkins interview in NG22. He got nearly every prediction wrong. For example, "...I thought that PlayStation was going to be a really large market... we would publish for it ourselves. I don't believe that." He also wrongly states that Sony lost lots of money with their system. His hyped ability to peer into the future even saw a DVDGame box by 1998 for \$299! Combined with Studio 3DO's track record of mediocre titles, why is this guy considered such a genius?

Karl Cramer Jr.

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Two words: Electronic Arts. Also, despite 3DO's dismal hardware history, he did manage to make \$120 million on M2 hardware.

Still, he needs new success soon, or he'll fall into the "Silicon Valley has-been" category, and don't think for a second Trip isn't more aware of that than anyone.

Your points are valid, but if PSX hadn't risen to dominance so quickly, Matsushita's M2 might have been that \$299 DVD game system — that's certainly what he was talking about. Finally, 3DO is working on PlayStation software as of this writing, so we guess he now believes!

ending

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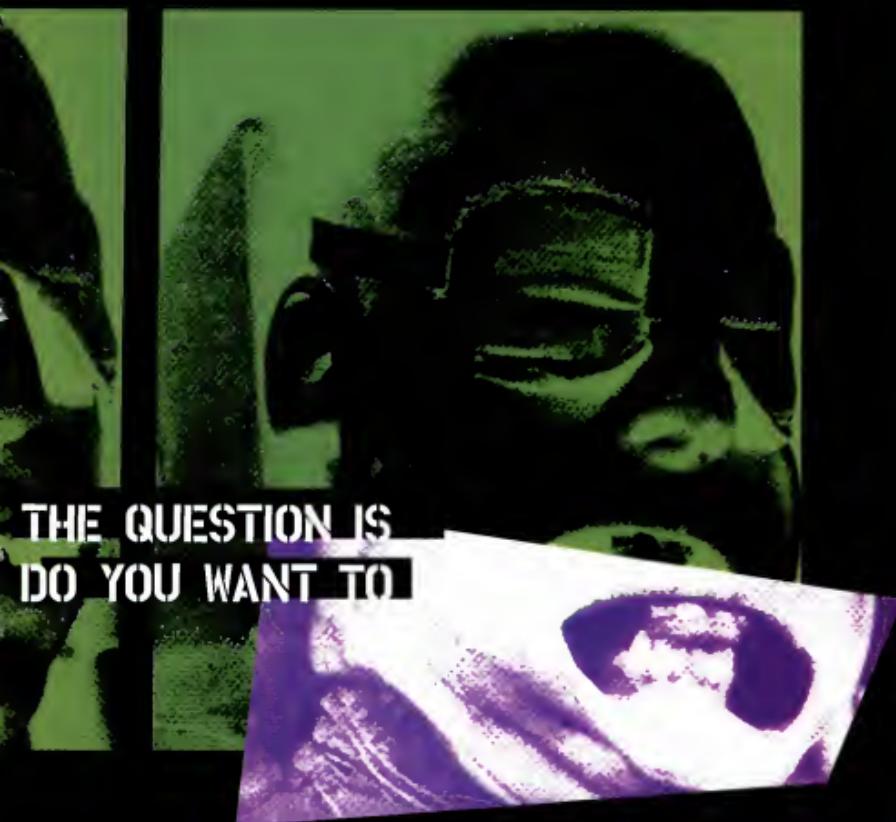
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